

A & Q

What is it?

A tool that tests students' knowledge of a given topic by giving them an answer, e.g. 'Henry VIII', and having them generate possible questions ("Who was an English king? Who had lots of wives?")

What are the benefits of using this tool?

In order to teach our students effectively, we need to determine what they already know and understand about the material we're planning to cover. Involving students in an A & Q session (*answer and question*, as opposed to *question and answer*) is a fun and engaging way to do this. The A & Q format encourages students to exercise their creative thinking skills and interact with their classmates. It also prepares them for the learning to come by helping them activate their prior knowledge.

What are the basic steps?

1. Explain the A & Q format to students. (You'll give them an answer and they'll come up with as many possible questions for that answer as they can in a given amount of time.)
2. Before engaging students in an A & Q session about your content, let them practise as a class using a familiar topic like pets, food or music; see sample dialogue below.

Teacher: If 'dog' is the answer, what are some possible questions?

Students: What's a four-legged animal with fur? What do police use to locate explosives? What is a Dalmatian an example of? What's a popular pet that's not a cat? What's an animal that helps blind people 'see'? What's man's best friend? What kind of animal is the main character in *Marley & Me*?

3. Use the A & Q format to assess students' knowledge of a topic you're planning to teach (or a topic you've already taught):
 - Give students an answer that relates to the topic in question.
 - Challenge them to think creatively and jot down as many questions for that answer as they can.
4. Invite students to share their responses with the class and encourage them to build off each other's ideas.
5. Collect and review students' responses to determine what students already know and understand about the given topic. Design your instruction accordingly.

How is this tool used in the classroom?

- ✓ To assess students' knowledge of a given topic and design instruction accordingly
- ✓ To help students access their prior knowledge at the start of instruction
- ✓ To help students review (and let us assess) what they've learned at the end of a lesson or unit

A & Q sessions are typically used to assess students' prior knowledge before instruction begins (see Example 1), but they work just as well for assessing student learning during or at the end of instruction (see Example 2).

EXAMPLE 1: Before beginning a graphing unit targeting 'Data representation and interpretation' (ACMSP069), a Year 3 teacher used the following question to assess students' background knowledge: "If 'bar graph' is the answer, what are some possible questions?" She used students' responses (see box below) to help her determine how much reviewing she needed to do (less than she thought!), to identify any misconceptions that she might need to address, e.g. the idea that the bars on a bar graph are always vertical, and to help her segue into her new material: "Believe it or not, each box on a bar graph can actually represent more than one thing. Later this week, we'll see how!"

What is one kind of graph?	What is a graph you can use to solve more than or less than problems?
What is a kind of graph that's not a picture graph?	What is a graph you can use to count how many of something there are?
What is a graph where the bars go up and down?	What is a graph where each box stands for one of the things you counted?
What is a graph you can see in a newspaper or book?	What is a way to show amounts using a drawing instead of numbers?

EXAMPLE 2: A Year 8 history teacher used an A & Q session instead of a traditional Q & A session to assess (and help his students review) what they had learned about Renaissance Italy prior to an end-of-unit test. He hung pieces of poster paper around the room, recorded a different 'answer' on each piece of paper and invited students to move around and record questions for each answer. At the end of the session, students regrouped to discuss their responses and identify topics that needed further review. Some of the answers that they were asked to respond to are shown here:

- If 'Leonardo da Vinci' is the answer, what are the possible questions?
- If 'humanism' is the answer, what are the possible questions?
- If 'Galileo' is the answer, what are the possible questions?
- If 'astrology' is the answer, what are the possible questions?

Teacher Talk

- ➔ Avoid basing instructional decisions solely on students' verbal responses (just because one student knows something doesn't mean that all students do). Review students' written responses or survey the class before deciding how to proceed. ("Did anyone other than Tim know about Galileo's astronomical findings? Who can name one of his observations?")
- ➔ For a change of pace, try breaking students into teams and challenging each team to outdo the other in terms of the number, quality and creativity of their responses. This kind of friendly competition has been linked to significant gains in learning and achievement (Marzano, 2010).

Pretest

What is it?

A tool that prepares us to teach more effectively by telling us what our students already know about the material we're planning to cover

What are the benefits of using this tool?

Before treating you, a doctor listens to what you have to say, reviews your medical history and performs an examination. This kind of pre-assessment is just as important in the educational realm as it is in the medical one since it's impossible to prescribe the right kind of instruction for our students without examining their existing knowledge. Administering pretests prepares us to initiate instruction at a level that works for our students – not too hard (which can lead to frustration), not too easy (which can lead to boredom), but just right. It lets us differentiate instruction as well by making us aware of each student's individual needs and readiness level.

What are the basic steps?

1. Determine what students should know, understand and be able to do by the end of an upcoming lesson or unit. (What are the learning goals or targets?)
2. Develop questions or activities (a pretest) that will help you determine what students *already* know and understand about the material you're planning to teach. See p. 28 for design tips.
3. Clarify the purpose of the pretest before administering it. ("This will help *me* teach you more effectively by showing me what you have and haven't yet learned. It will help *you* visualise your progress by letting you compare what you know at the end of the unit with what you knew at the start.")
4. Administer the pretest. Explain that it won't be assessed and that students shouldn't worry if they can't answer many (or any) of the questions at this point in time. Clarify that the goal is for them to be able to answer these questions by the *end* of the lesson or unit.
5. Analyse the results of the pretest. Use what you learn to determine an appropriate entry point for instruction. (Where should I begin teaching?)
 - *If the pretest reveals gaps in essential background knowledge or skills*, back up and fill them in before starting on new material. Work with individuals, groups or the entire class.
 - *If students already know what you were planning to teach them*, skip ahead to something new – or teach the same material, but at a deeper level.
6. Accommodate different readiness levels by providing 'catch-up instruction' or 'jump-ahead instruction' for students (or groups of students) who need it.
7. *Optional*: Re-administer the pretest at the end of the lesson or unit so that you and your students can see how far they've come.

How is this tool used in the classroom?

- ✓ To assess students' background knowledge at the start of a lesson or unit
- ✓ To gather data that can help us differentiate instruction by readiness level

EXAMPLE 1: A Year 2 teacher administers a spelling pretest at the start of each week. Her goal is to show her students where they're going (what words will they need to know how to spell?) and where they are now (which words can they already spell?) so they can work to close the gap.

EXAMPLE 2: A Year 3 teacher begins the year by asking students to correct the capitalisation, punctuation and grammar errors in a writing sample that he gives them. His goal is to determine which skills his students have mastered and which they need to work on. Rather than waste time teaching students skills they already know, he groups students based on their pretest performance (students who need to work on subject-verb agreement, students who need help using quotation marks etc.) and works with each group separately.

EXAMPLE 3: A Year 8 mathematics teacher uses her unit learning goals as a guide when crafting the questions for her pretests. She also consults the Tips for Designing a Pretest form (p. 28) to remind herself of the different kinds of questions she might want to include. In the case of her three-dimensional figures pretest (below), which was designed to assess students' readiness for a unit on volume, she chose to include a *comparison* question, a *drawing* question, a *definition* question, a *real-world connection* question and a *calculation* question.

PRETEST: Three-dimensional figures

Instructions: The questions on this pretest are ones that you'll learn how to answer during the upcoming unit. If you know (or think you know) any of the answers already, that's a bonus – go ahead and jot them down. Don't worry about getting things wrong since this test won't be assessed.


1. What's the difference between two-dimensional and three-dimensional figures?
2. Do you know anything at all about the three-dimensional figures below? Can you sketch any of them?

rectangular prism	triangular prism	cylinder
rectangular pyramid	triangular pyramid	cone

3. What is volume? (Think maths, not how loudly you play your music!)
4. Why might people want to know the volume of something?
5. How might we calculate the volume of any of the figures in question 2? Any ideas?

EXAMPLE 4: A health education teacher designed her respiratory-system unit around three central questions: *What do we breathe? Why do we breathe? How do we breathe?*

She posed these three questions on her pretest (below) to see what students knew at the start of instruction. She included these same questions on her end-of-unit test as well so that she and her students would be able to see how far they had come.

<p>RESPIRATION PRETEST (3 questions total; this test won't be assessed)</p> <p>We'll be investigating the three questions below during our upcoming unit on respiration. In the meantime, jot down anything you think you already know.</p>			
<p>What do we breathe?</p>	<p>Why do we breathe?</p>	<p>How do we breathe?</p>	

Variation: Range Finder

A Range Finder is a specific type of pretest. To use the Range Finder format, identify a skill that you'll be helping students develop during an upcoming lesson or unit and design three different tasks to test their proficiency at that skill – each at an increasing level of difficulty. Present the three tasks to students, instruct them to complete the most challenging one they can and use their choices to gather information about individual readiness levels (who needs Level 1 instruction, who needs Level 2 etc.). Design lesson plans that will accommodate the needs of students at each level.

Teacher Talk

- Ideally, pretests should be administered at least a week before instruction begins so that you have time to analyse the results and design your lesson plans accordingly.
- Clarify that pretest scores are a reflection of what students have already learned – *not* how smart they are. (“Your score on a pretest is simply a reflection of your prior knowledge and experiences. Since all of you have had different experiences, all of you will know different things about different topics – more about some, less about others.”)
- With all that we're expected to do, it can be tempting to pass on pretests and get right to teaching. While it's true that skipping pretests can save time up front, pretests actually save time in the end by letting us teach more effectively – no wasting time teaching things that students already know, no getting halfway through a unit only to realise that students are lost because we failed to identify and correct gaps in background knowledge and so on.
- Try not to be discouraged if pretest results reveal that students lack background knowledge and skills that they “should have already acquired.” Instead of dwelling on these gaps, do as Chapman and King (2008) suggest and use “this valuable time and energy...to design plans and activities that fill the gaps” (p. 39).
- Questions like the ones in Example 4, which are general enough for students to be able to respond to in some way before instruction begins and which should elicit increasingly sophisticated responses as instruction progresses, are ideal pretest questions. (Essential questions often meet these criteria.)

Tips for Designing a Pretest

Include questions that will assess prerequisite knowledge as well as upcoming knowledge.

- Create pretest questions that will tell you whether students have the background knowledge and skills they'll need to understand the material you're planning to teach them.

Before teaching a lesson on DNA replication, for example, check if students understand the basic structure of DNA. Before beginning a unit on three-digit multiplication, check if students have mastered one- and two-digit multiplication.

- Create pretest questions that will test students' command of the material you're planning to teach them. (Have they already learned any or all of this material in another class?)

Consider different types of questions and tasks. *(Think: What is the best way to gather the information that I need?) Among other things, you could ask students to*

- Fill in blanks or mix and match.
- Complete multiple-choice questions.
- Define. *(What is a prime number?)*
- Give examples. *(What are some examples of amphibians?)*
- List facts. *(List anything you think you already know about the Black Death.)*
- Calculate. *(Convert these from molar to millimolar.)*
- Locate. *(Can you find Japan on a map? Can you locate an example of irony in this story?)*
- Identify. *(Which of these is an example of Gothic architecture? Can you identify the picture of a cello?)*
- Label. *(Label the following parts of the human body.)*
- Draw. *(Can you represent these fractions using pictures? Can you draw any of these types of arches?)*
- Compare. *(What is the difference between a fact and an opinion?)*
- Analyse. *(Based on the data, which player would you choose to take the penalty kick?)*
- Demonstrate. *(Does anyone know how to julienne a vegetable? Come show me!)*
- Perform. *(Sight-read this piece of music.)*
- Make real-world or personal connections. *(What is the role of government in our everyday lives?)*
- Sequence or order. *(Sequence these events by date. Order these negative numbers from smallest to largest.)*
- Generate preliminary answers to essential questions from your lesson or unit. *(Can numbers lie? Does fairness always mean treating everyone the same? What makes a classic novel 'classic'?)*

Consider different formats, both formal and informal.

- Traditional paper-and-pencil test
- Classroom discussion or question-and-answer session
- Survey *(How many of you can define this term? Solve this problem?)*
- Memory Box (See pp. 92–95 for a description of this technique.)
- Range Finder (See p. 27 for a description of this technique.)
- White Boards or Letter Cards (See p. 73 for a description of these techniques.)

What Comes to Mind?

What is it?

A quick and easy way to assess the background knowledge, questions and feelings that students have about topics we're planning to teach

What are the benefits of using this tool?

Determining what students know, feel and wonder about a topic before we begin teaching it can prepare us to teach that topic more effectively. With all that we're expected to accomplish, however, finding the time to gather this kind of information can sometimes be challenging. This tool addresses the challenge and makes the pre-assessment process more manageable by providing a fast and no-fuss way to uncover students' thoughts, feelings and interests. It provides us with a wealth of valuable information and it helps students activate their prior knowledge – all within a matter of minutes.

What are the basic steps?

1. Introduce the topic you're about to teach. ("For the next few days, we'll be learning about ____ .")
2. Ask students what they know, feel and wonder about that topic. Have them record their responses on the reproducible organiser (p. 30) and/or share their responses aloud.
3. Review students' responses. Use what you learn to guide and inform your instructional plans. Among other things, you might:
 - Address and correct factual errors or misconceptions.
 - Make connections between things students already know and things you're about to teach.
 - Adjust the entry point for instruction according to students' existing knowledge. If most students already know the material you were planning to teach, for example, you might choose to skip ahead.
 - Incorporate students' questions into your lesson plans.
 - Explore the causes of – and look for ways to change – negative feelings or perceptions. See Attitude ACE (pp. 31–33) for ideas.

How is this tool used in the classroom?

- ✓ To determine what students know, feel and wonder about a topic before you begin teaching
- ✓ To adjust instruction according to students' interests and needs

Name:

Date:

What Comes to Mind?

What comes to mind when you think about _____?

Facts?

Feelings?

Questions?

Anything else?

Attitude ACE

What is it?

A survey-based tool that helps us understand and improve students' attitudes toward our content areas

What are the benefits of using this tool?

Because students' attitudes can have a powerful impact on learning, it's important to find out what those attitudes are, why students have them and how we can improve them. This tool presents a customisable attitude survey for gathering this kind of information. By giving us insight into the things that engage and motivate our students, the survey prepares us to cultivate more positive attitudes. It also raises students' awareness of the attitudes they're bringing to class, so that they, too, can work on improving them.

What are the basic steps?

1. Determine what subject area you want to assess students' attitudes about (reading, maths etc.).
2. Think about the kind of information you want to gather and design an Attitude ACE Survey that will help you gather it (see p. 32 for instructions and sample questions). Include as many questions as you see fit – and whatever blend of *A*, *C* and *E* questions best serves your purpose.
 - Use 'A' questions to uncover Attributions (why do you have this attitude?) and Aspirations.
 - Use 'C' questions to learn about students' Confidence level and Challenges they've faced.
 - Use 'E' questions to learn what students are good at (Expertise) and what they find Engaging.Note: Surveys can be used with individual students or groups of students, e.g. struggling students), instead of with the class as a whole.
3. Before administering the survey, explain its purpose. ("This survey will help me understand how you feel about this subject, how I can make it more enjoyable and how I can help you succeed.")
4. Administer the survey and analyse students' responses. Use what you learn to inform and improve future instruction:
 - Identify and address content-specific challenges that are getting in the way of learning.
 - Increase engagement by designing lessons and assessment tasks that appeal to students' interests.
 - Boost confidence by creating assignments and assessments that capitalise on students' talents.
5. Teach students what they can do to improve their confidence and develop a more positive attitude toward your content area. Help them recognise that attitude and effort really do matter. (See the Effort Tracker tool, pp. 227–230, for ideas about how to do this.)

Creating an Attitude Ace Survey

Instructions: Think about the kind of information you're looking to gather and use a mixture of **A**, **C** and **E** questions to help gather it. Choose from the questions below or generate your own using these as models.

A	<p>Attribution & Aspiration questions</p> <ul style="list-style-type: none"> • How do you feel about this subject area? Why do you have this attitude? • Have you been successful in this subject area before? To what do you attribute your success or lack of success? <ul style="list-style-type: none"> <input type="checkbox"/> your attitude <input type="checkbox"/> your ability <input type="checkbox"/> your effort level <input type="checkbox"/> other: _____ • What kind of mark do you expect to get in this class? Why? • What do you hope to learn, achieve or get better at in this class? • What do you expect from me as your teacher? What can I expect from you?
C	<p>Confidence & Challenge questions</p> <ul style="list-style-type: none"> • When it comes to this particular subject area, my confidence level <ul style="list-style-type: none"> <input type="checkbox"/> is at an all-time low <input type="checkbox"/> isn't very high <input type="checkbox"/> is reasonably good <input type="checkbox"/> goes through the roof • My confidence or lack of confidence (<i>circle one</i>) in this subject area stems from... • When I feel comfortable and confident in class, it's probably because... • Classes in this particular subject area are most like <ul style="list-style-type: none"> <input type="checkbox"/> a thrilling ride <input type="checkbox"/> a stroll in the park <input type="checkbox"/> climbing a mountain <input type="checkbox"/> walking on hot coals • I find it challenging to pay attention in this class or subject area because... • The things that make this subject area challenging or not challenging (<i>circle one</i>) for me are... • Some learning challenges that I've overcome in this subject (or another subject) are...
E	<p>Expertise & Engagement questions</p> <ul style="list-style-type: none"> • Three things I can contribute to this class are... • My two greatest strengths in this subject area are... • I am good at the following things: <ul style="list-style-type: none"> <input type="checkbox"/> reading <input type="checkbox"/> listening <input type="checkbox"/> building or drawing things <input type="checkbox"/> helping others <input type="checkbox"/> analysing information <input type="checkbox"/> writing <input type="checkbox"/> supporting an idea with evidence <input type="checkbox"/> remembering facts <input type="checkbox"/> thinking creatively <input type="checkbox"/> solving problems <input type="checkbox"/> asking questions <input type="checkbox"/> following directions <input type="checkbox"/> sharing my feelings • I do my best work <input type="checkbox"/> on my own <input type="checkbox"/> with a partner <input type="checkbox"/> in a group • If I am paying attention in class, it's probably because... • The kinds of lessons, activities and homework assignments that I like most are... • If you want to get me excited about learning something, you should try...

How is this tool used in the classroom?

- ✓ To understand and improve students' attitudes toward specific content areas

EXAMPLE: An English teacher designed the survey below to assess her students' attitudes about reading and their perceptions of themselves as readers. To gather the information that she needed, she used some of the sample questions from p. 32 and generated some questions of her own.

ATTITUDE ACE SURVEY	
Subject area: READING	
1. Do you consider yourself a good reader?	<input type="checkbox"/> Yes <input type="checkbox"/> Sort of <input type="checkbox"/> No Explain: _____
2. What is the name of the last book that you read?	_____
	Did you like the book? <input type="checkbox"/> Yes <input type="checkbox"/> No Why? _____
3. Given your choice, what would you prefer to read? (Check off one or more boxes.)	
	<input type="checkbox"/> newspaper <input type="checkbox"/> magazine <input type="checkbox"/> online article <input type="checkbox"/> novel <input type="checkbox"/> play <input type="checkbox"/> short story <input type="checkbox"/> comic book
	<input type="checkbox"/> textbook or other informational text <input type="checkbox"/> poem <input type="checkbox"/> something else: _____ Why? _____
4. What kinds of texts do you avoid like the plague? (Check off one or more boxes.)	
	<input type="checkbox"/> newspapers <input type="checkbox"/> magazines <input type="checkbox"/> online articles <input type="checkbox"/> novels <input type="checkbox"/> plays <input type="checkbox"/> short stories <input type="checkbox"/> comic books
	<input type="checkbox"/> textbooks or other informational texts <input type="checkbox"/> poems <input type="checkbox"/> something else: _____ Why? _____
5. Do you enjoy being read to?	<input type="checkbox"/> Yes <input type="checkbox"/> No Why? _____
6. What are your strengths as a reader? Name at least TWO.	_____
7. What would you like to get better at? List at least TWO things.	_____
8. What kind of mark do you expect to get in this class? Why?	_____
9. Do you prefer working solo? Or do you enjoy working with others?	_____
10. What do you expect from me? What can I expect from you?	_____

When this teacher reviewed the survey data, the following things jumped out at her:

- 90% of her students didn't perceive themselves to be good readers.
- 87% of her students felt that they wouldn't get anything above a C in the class.
- 75% of students enjoyed working in groups and almost all students enjoyed being read to.
- Students' favourite reading materials were magazines, short stories and online articles.

She responded to the data by taking the following steps:

- To boost students' confidence and skill level, she spent the first two months of school teaching them the tricks and techniques that good readers use to help make sense of complex texts (previewing, summarising, note taking etc.).
- To take advantage of students' fondness for group work, she set up peer-reading partnerships.
- To improve students' perceptions toward reading, she tried to make reading more enjoyable for them by designing assignments around their preferred reading materials, e.g. "Write a well-crafted summary paragraph about the magazine or online article of your choice".

When the teacher re-administered the survey three months later, she was pleased to find that these strategies had significantly improved students' attitudes about themselves as readers.

Best Foot Forward

What is it?

A survey-based tool that prepares us to differentiate instruction by helping us gather information about students' strengths and talents

What are the benefits of using this tool?

Differentiation expert Carol Ann Tomlinson reminds us that we can enhance the effectiveness of classroom instruction by paying attention to who our students are as individuals. And in working to create differentiated, student-centred classrooms, what could be more important to pay attention to than the things our students are good at? Teaching in a way that acknowledges and capitalises on students' natural strengths is a sure-fire way to boost confidence and accelerate learning. This tool, which was inspired by Tomlinson's (2010) work, helps us do that by showing us what our students are good at and how we can motivate them.

What are the basic steps?

1. Initiate a conversation with students about their personal strengths and talents. ("What are you really good at doing? When are you at your best?")
2. Tell students that you're interested in learning more about their individual strengths. Explain that having this kind of information will enable you to teach in a way that helps everyone be successful.
3. Distribute and have students complete the Best Foot Forward Survey on p. 36. When using this tool with younger students, feel free to simplify the survey or administer it orally.
4. Have students share and compare responses with a partner, in small groups or as a class. (This is a good way to help students get to know each other and build classroom unity.)
5. Use students' responses to highlight the idea that different people have different talents. Make it clear that all talents are valuable and that all should be appreciated and respected.
6. Review students' surveys. Keep students' responses in mind when designing lessons, activities and assessment tasks. *Think:* What can I do to appeal to or capitalise on students' talents?

How is this tool used in the classroom?

- ✓ To gather information about individual students' strengths and talents
- ✓ To differentiate instruction and assessment

The examples below illustrate some of the many ways teachers have used Best Foot Forward survey data to boost engagement, confidence and achievement in their classrooms.

EXAMPLE 1: Using survey data to make instruction more engaging and effective for everyone

After finding out that a lot of her students learned best by 'doing things' rather than sitting still and listening, a teacher replaced some of her usual lectures with interactive activities, hands-on projects and excursions to the library. Her reward for making this simple swap? Higher levels of engagement and achievement – plus fewer disruptions and discipline problems!

EXAMPLE 2: Using survey data to reach out to individual students

A Year 3 teacher learned that a student ('Marti') who was having trouble forming relationships with her peers viewed 'helping others' as her greatest strength. To help Marti and her classmates develop their social and interpersonal skills, this teacher began pairing students up for review and study sessions. The peer partnerships that he established proved to be beneficial for nearly all his students, but they were particularly beneficial for Marti, whose ability and willingness to help others laid the foundation for future friendships.

EXAMPLE 3: Using survey data to design differentiated assessment tasks

After teaching two lessons on the growing antibiotic-resistance problem, a science teacher let his students demonstrate their learning in ways that were consistent with their talents. He designed five different assessment tasks, each of which was linked to a subject area students had said they were good at on their surveys and let students choose which task to complete.

CHOOSE YOUR ASSESSMENT TASK	
<i>If you're good at this subject...</i>	<i>... you might want to try this task:</i>
English, journalism or debate	Write an editorial that presents and logically outlines the importance of changing the ways that we prescribe, administer and use antibiotics.
art or music	Prepare and present an informative billboard or song for a public service campaign about the responsible use of antibiotics.
maths	Create 'formulas' to help doctors, patients, farmers and product-development teams (like the ones that develop antibiotic-containing cleansers and tooth-pastes) make smarter decisions.
health or science	Research and report on the public health and safety implications of antibiotic-resistant strains of bacteria.
drama or physical education	Meet with students who share your talents to develop and act out a play that's designed to educate others about the dangers of misusing antibiotics.

Name: _____

Date: _____

Best Foot Forward Survey

1. I learn best when...
2. My greatest strength is...
3. You'll be happy to have me in your class because...
4. I'm happiest when...
5. A nice thing that a teacher, friend or family member might say about me is...
6. The subject that I do best in is _____. Here are some reasons why:
7. Things I'm good at outside school include...
8. Things I'm good at in school include...
9. If I'm paying attention or working really hard, it's probably because...
10. I do my best work when lessons, activities and assignments are...

From Topics to 'Top Picks'

What is it?

Inspired by Tomlinson's (2001) Interest Questionnaire, this tool prepares us to design more engaging lessons by providing information about students' interests. (Students examine the topics from an upcoming unit and identify their 'top picks')

What are the benefits of using this tool?

Everyone knows that students learn better when they're interested in what they're studying. The bad news is that with all the other demands teachers face, student interest often gets overlooked, despite its power to improve learning. The good news is that assessing students' interests relative to the content you're teaching isn't a difficult process. All it takes is a simple ranking system ("Rank these topics from most to least interesting") and some time for students to identify their top picks. Once you've gathered this information, you can use it to design instruction that both appeals to and expands students' existing interests.

What are the basic steps?

1. Make a list of the topics you plan to cover during an upcoming unit. Invite students to rank the topics from most to least interesting.
2. Review the results of this student-interest survey. Use what you learn to inform and enhance classroom instruction. Specifically,
 - Look for ways to accommodate students' interests when designing lesson plans and assessment tasks. See p. 39 (upper box) for suggestions.
 - Encourage students to broaden their interest horizons by trying to make less interesting topics more appealing. See p. 39 (lower box) for suggestions.
3. Repeat the survey at the end of the unit so that you and your students can see how (or if) their interests have changed.

How is this tool used in the classroom?

- ✓ To assess students' interests and use those interests to inform instructional decisions

EXAMPLE 1: The Year 7 history teacher who designed the interest survey below made an effort to carry the interest concept throughout her unit. She aimed to engage student interest by generating creative names for her unit topics (see Part 1 of the survey) and by setting up visually appealing learning centres where students could go to learn about each topic. She also tried to broaden students' interests by introducing a fun activity (museum trip) to make the topic voted least interesting (Ancient artefacts) seem more exciting.

EXAMPLE 2: At the start of a gymnastics unit, a physical education teacher asked her students to rank the various events (balance beam, floor etc.) from most to least interesting. As the unit progressed, she encouraged them to reevaluate their interests and devote the bulk of their practice time to their top three choices. Students were told that their end-of-unit marks would be largely determined by their performance in those same three events.

EXAMPLE 3: A Year 1 teacher used the Shared Interest Groups variation described on p. 39 to deepen her students' grasp of critical story elements. After introducing a particular story element, e.g. setting, she'd put different books on tables around the room, have students examine the books and ask them to sit at the table with the book that looked most interesting. The students at each table would then read their selected books and discuss whatever story element they had been learning about at the time. ("The setting in our group's book is...")

STUDENT INTEREST SURVEY

Name: _____ Date: _____

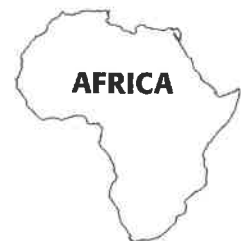
Out of Africa...

Next week, we'll start learning about human migration and the establishment of ancient societies. Before we begin, I am interested in finding out what you already know about this topic and what you're interested in learning. Please help me by completing this three-part survey.

PART 1: The topics that we'll cover in this unit are listed below. Please rank them from most to least interesting (1=most interesting, 10=least interesting).

If there are any topics that you wish we'd cover, add them to the list!

- _____ Where did we come from?
- _____ The long journey from Africa
- _____ Your ancestors were Neanderthals!
- _____ Life as a hunter-gatherer
- _____ Ice Age no more!
- _____ Old Neolith had a farm...
- _____ Early village life
- _____ Trading goods
- _____ Ancient artefacts
- _____ The faith of our forefathers
- _____ Other: _____



PART 2: Do you already know anything about ancient human migration and early settlements? If so, please tell me about it on the back.

PART 3: Reevaluate your responses at the end of the unit to see how much you've learned and whether your interests have changed.

Teacher Talk

- ➔ The idea *isn't* to teach the topics students are interested in and skip the rest; the idea is to use students' interests to make instruction more engaging and effective. The teacher who created the survey in Example 1, for example, covered all ten survey topics in class; she simply used students' interests to decide where to begin, which topics to emphasise and which topics to try and make more interesting.
- ➔ To make this tool do double duty, design your survey to assess students' background knowledge as well as their interests; use the survey in Example 1 (see Part 2) as a model.

Six Ways to Accommodate Students' Interests

- ✓ Build choice into activities and assessment tasks so that students can work on things that interest them. ("Which of the dance styles we studied do you like best? Choreograph an original piece in that style.")
- ✓ Create enrichment centres where students can go to learn more about topics that interest them.
- ✓ Allocate more instructional time to topics that students select as their 'top picks'.
- ✓ Begin your unit with whatever topic students deem most interesting. ("Since most of you picked 'Your ancestors were Neanderthals!' as your top choice, we'll start there.")
- ✓ Develop – or invite students to develop – projects related to their interests.
- ✓ Organise students into Shared Interest Groups so that they can discuss, explore or report on topics of interest with like-minded classmates. (The Shared Interest Groups variation is explained in more detail below; it's also illustrated in Example 3.)

Six Ways to Broaden Students' Interests

- ✓ Create interesting and provocative names for the topics you plan to teach. Use the survey in Example 1 as a model.
- ✓ Connect your content to students' interests, hobbies and personal experiences.
- ✓ Present less interesting topics in more engaging and interactive ways, e.g. use a hands-on activity instead of a sit-still-and-listen lecture.
- ✓ Give students the option to acquire content knowledge that *doesn't* interest them in a way that does. ("Review the list of learning targets for the arteries or veins portion of our circulatory system unit. Then decide how you want to learn the relevant material. You can read your textbook, browse the Internet, dissect a frog or watch a video.")
- ✓ Let students demonstrate their learning in a way that appeals to them. ("Summarise what you learned by building a model, creating a podcast or writing a descriptive paragraph.")
- ✓ Pair up students with different interests. Challenge them to change each other's opinions.

Variation: Shared Interest Groups

The purpose of establishing Shared Interest Groups (Silver, Strong & Perini, 2007) is to let students explore material that interests them with classmates who share their interests. To establish the groups, present students with a choice of books to read, topics to investigate, activities to complete or problems to solve. Let them sample the different options, e.g. skim the first page of each book or read a one-sentence summary of each topic, choose the option that interests them and work on their selected task with students who made the same choice. Whenever possible, have students discuss their choices as a class before breaking off into groups. ("Why does this interest me? Why did I pick this as opposed to that?") These kinds of discussions can give you insight into students' likes and dislikes. They can also serve to expand students' interests. ("Hmmm...that topic sounds more interesting than I thought. Maybe I should switch groups.")

One way to use this variation is to have students select their favourite topic from a student-interest survey and research that topic with like-minded classmates. These 'expert groups' can then be called on during the course of the unit to provide insight into the topics they've pursued.

Hand of Knowledge

What is it?

A tool that provides insight into students' interests, talents and learning preferences by having them complete a hand-shaped organiser with six getting-to-know-you questions

What are the benefits of using this tool?

The current emphasis on standards and accountability has us so focused on assessing *what* our students know that we're spending less and less time assessing *who* they are as individuals. The problem with prioritising standards over students is that we can actually teach our students a lot more effectively when we're aware of their interests, talents, challenges and aspirations. This tool makes it easy to gather this kind of information by getting students to think and talk about who they are, how they learn and what's important to them.

What are the basic steps?

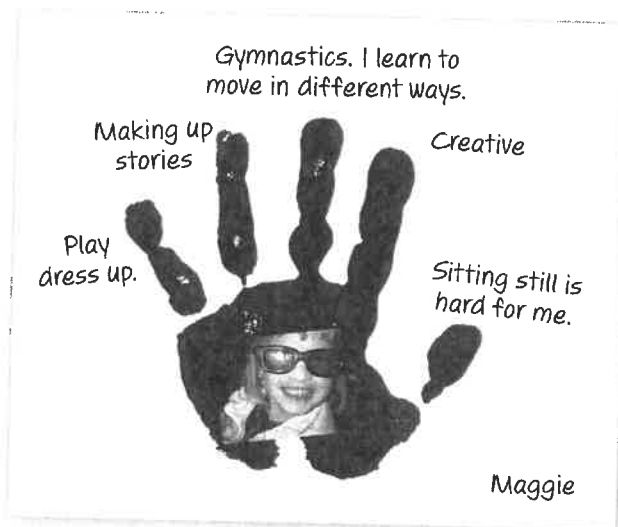
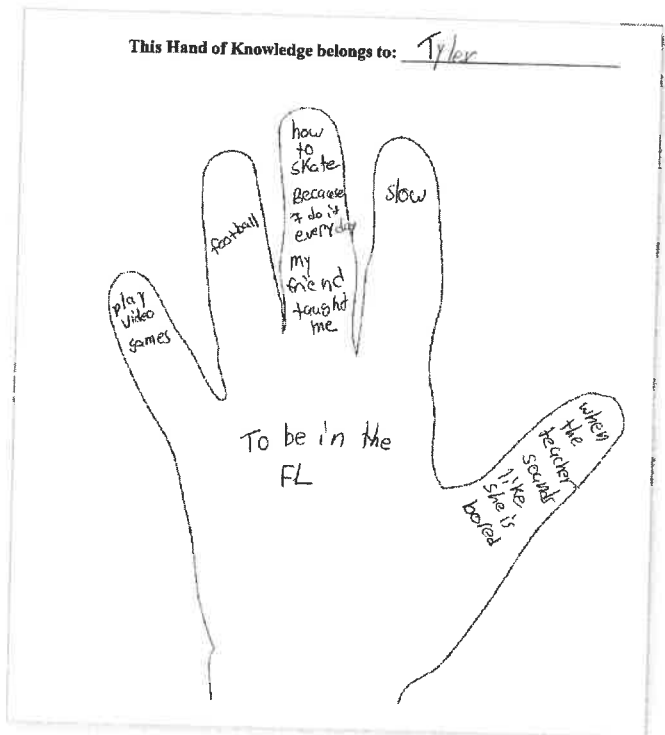
1. Have students trace one of their hands on a piece of paper.
2. Post the following questions on the board or read them aloud:
 - Pinky finger* → What do you do for fun in your free time?
 - Ring finger* → What is something that you're really good at?
 - Middle finger* → Think about something interesting that you learned outside of school. What is it? Why is it interesting? How did you learn it?
 - Index finger* → What word or phrase best describes you as a learner?
 - Thumb* → When school feels hard or boring, what makes it feel that way? Be specific.
 - Palm* → What is a dream that you have for your future?
3. Have students record their responses (words and/or pictures) on the appropriate parts of their 'hands'.
4. Help students get to know their classmates by having them share and compare hands with a partner or by posting their hands around the room. Tell them in advance if their hands will be on display.
5. Review students' hands to gather information about interests, talents, intelligences, and learning preferences and challenges.
6. Think about how you can use this information to make future learning experiences more productive and enjoyable for students (specific individuals as well as the entire class). Here are a few ideas:
 - Design (or let students design) lessons, activities and assignments around their interests.
 - Provide opportunities for students to demonstrate and use their individual talents.
 - Explain how the things that students are learning are relevant to their dreams for the future.

How is this tool used in the classroom?

- ✓ To learn about students' interests, talents, learning challenges and dreams

EXAMPLE 1: A mathematics teacher whose students were less than enthusiastic about calculating percentages abandoned her usual percentage worksheets and instead created themed problem sets around her students' interests and hobbies. To get a group of her sports-obsessed students excited, for example, she challenged them to calculate the free-throw averages, on-base percentages and pass-completion statistics for their favourite athletes.

Since one of these students had used the word "slow" to describe himself as a learner (see Hand of Knowledge at the right), she also worked with him to develop his confidence and basic skills. Among other things, she often reminded him that learning the material was what mattered – not learning it quickly.



EXAMPLE 2: A Year 1 teacher made this tool more fun and personal for students by recording their responses on handprints and having them decorate their prints with photos that captured their personalities. One student's print and the photo that her grandmother helped her select, is shown at the left.

Based on this student's index- and ring-finger responses, her teacher tried to engage her in activities that let her express her creativity as often as possible. The result? Getting Maggie to sit still became less of a problem!

EXAMPLE 3: At first, Jade's teacher wasn't sure the information on her Hand of Knowledge (not shown) was all that useful. After thinking about it for a few minutes, however, he realised that Jade's fondness for tailgating, talking to friends and people watching were suggestive of a strong interpersonal and social intelligence – and that he might be able to engage Jade's interest and help her thrive by involving her in activities, e.g. cooperative learning activities, discussions, debates, that would let her capitalise on her social, interpersonal and oral communication skills.