**ATL SKILLS FOR A POST-COVID DIGITAL WORLD -**

**Metacognitive skills – reflection, thinking about thinking, learning about learning**

* **Metacognitive Knowledge** – students noticing and learning how they are learning - the thinking and learning strategies, techniques and skills they use to achieve successful learning
* **Metacognitive Performance** – students using that knowledge to improve their learning performance, change ineffective strategies, try new techniques, learn new skills
  + The key to metacognition is ***noticing your own thinking***

**Developing Metacognitive Knowledge using Think-Alouds:**

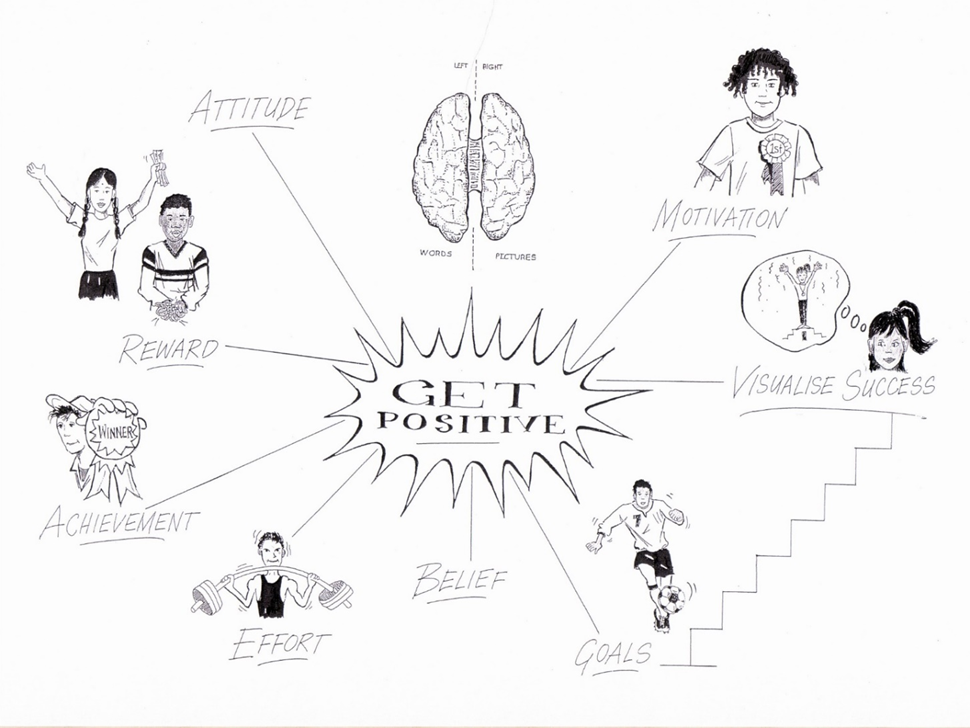
* The **‘Student’** – is working on the puzzle and is allowing all their internal dialogue to be audible, they are saying out loud every word and every thought that is coming into their mind
* **The ‘Teacher’** - is not working on the puzzle, just listening carefully to the ‘student’ and encouraging them to keep continuously talking - by saying things like “keep talking, keep talking…” and ***by asking questions***:
  + questions which ask the student what they are thinking, what are the difficulties they are having with the puzzle and how they are going to overcome them
  + questions which focus on the thinking process ***NOT*** on the solution to the puzzle
  + ***THE ‘TEACHER’ MUST NOT HELP THE ‘STUDENT’ FIND THE ANSWER***

**Developing metacognitive knowledge through reflection on process**

* In those exercises, when you got ‘stuck’ -
  + describe to your partner what you said to yourself
  + describe what you imagined
  + describe what you did to move past a ‘stuck’ moment
* That is your problem-solving process for visual puzzles
* Teach it to your students

**Developing students’ reflection on process using puzzles:**

* Give your students puzzles to solve and ask them if they are aware of deliberately using any problem-solving strategy to solve puzzles
* Ask students who successfully solve problems to outline their thinking process – the questions they asked themselves, the logic they followed – share with all students, create a thinking strategies noticeboard
* See how many different thinking strategies your students can come up with



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| --- | --- |
| **Ways of Thinking** | |
| Verbal | Non-Verbal |
| * words * logic * ‘one step at a time’ thinking * self-talk * analysing * phonetic memory * detail first | * pictures * guesses * ‘all at once’ thinking * imagination * synthesising * visual memory * big picture first |
| Turning those ideas into reality | Generating ideas that don’t yet exist |
| **Good problem solving requires both ways of thinking** | |

**Patterns in Maths:**

Use the number chart to find the pattern and then add some more numbers to the series:

1, 3, 5, 7, 11, 13 ……………………………………………………………………………………………………………

4, 22, 26, 34, 38 ……………………………………………………………………………………………………………

9, 33, 39, 51 …………………………………………………………………………………………………………………

5, 25, 55 ………………………………………………………………………………………………………………………

16, 20, 28, 32 ………………………………………………………………………………………………………………

12, 18, 30, 40 ………………………………………………………………………………………………………………

24, 36, 48, 60 ………………………………………………………………………………………………………………

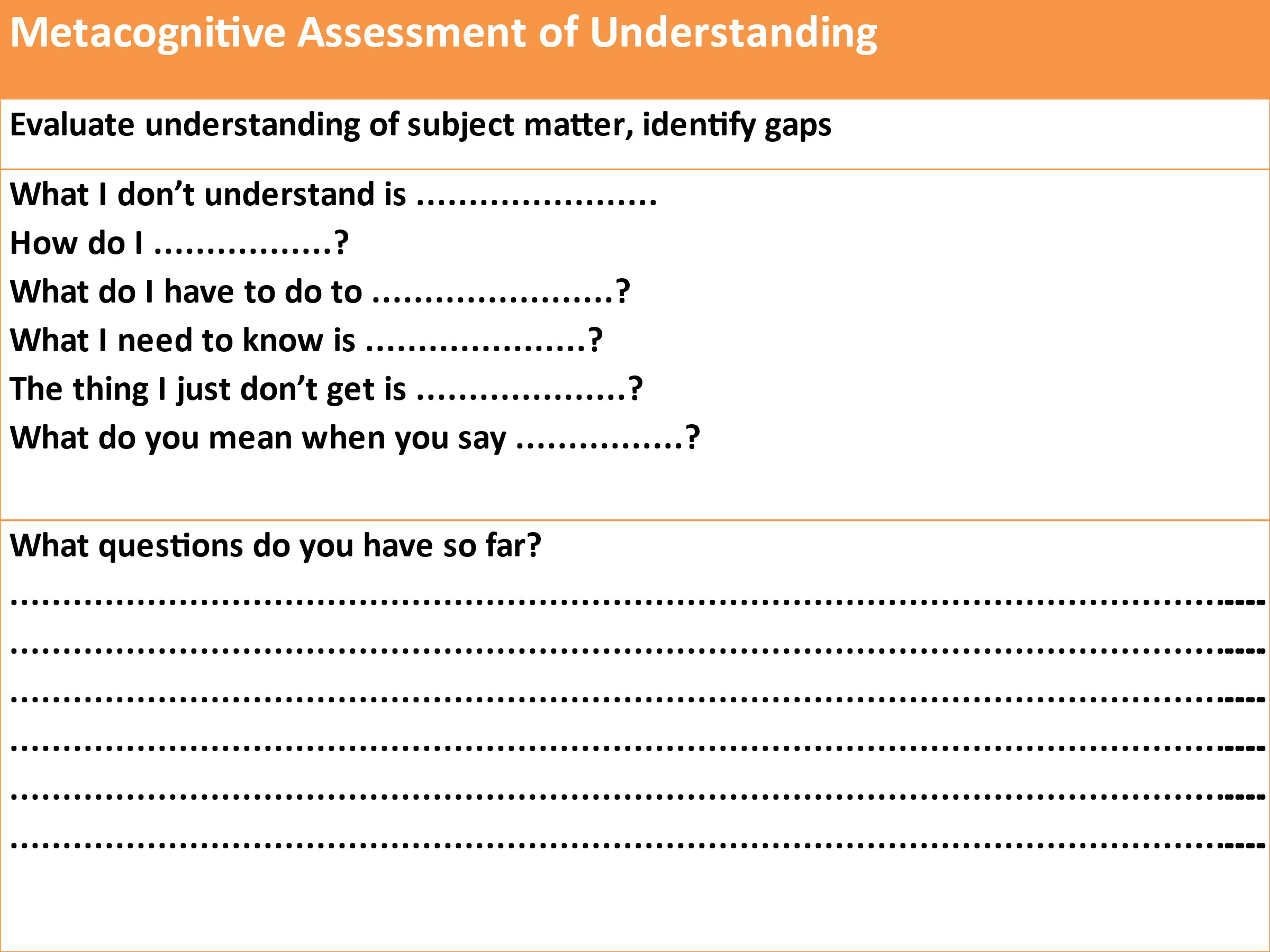
What’s special about;

60? ………………………………………………………………………………………………………………………………

72? ………………………………………………………………………………………………………………………………

**Using assessment of understanding to develop metacognitive skills:**

* At the end of any unit of work
  + Have they achieved the content and process goals?
  + What is their evidence?
    - *Is this really what you as a teacher need to know?*
  + What don’t they understand yet?
  + What questions do they have?
* This turns assessment into metacognitive training – recognising gaps in knowledge and understanding.
* Teaching students how to notice what they don’t yet know is far more useful than having them prove what they do know



**Assessing ATL skills:**

* When your ATL programme is working well you will see:
* improvements in the efficiency and effectiveness of your students learning in all their normal subjects
* improvements in their performance in formative and summative assessments and all high-stakes exams, and
* improvements in in their ability to manage their own learning

**Using ATL skills self-assessment to develop metacognition:**

* Learning how to accurately self-assess your own work is a ATL skill in itself
  + get students to self-assess their own ATL skill development
    - for this you first need Mastery statements for all ATL skills
    - then you need one development rubric to cover all ATL skills

**ATL skill Mastery**

* ‘Mastery’ is the highest standard of independent use of each ATL skill strand that you would expect to see by the end of the PYP - with no teacher support:
* “By the time our students finish the PYP they will be able to ………………………...”
* Take each ATL skill strand you are wanting to develop and create a mastery statement for that skill

**Rubric for all ATL skill development and assessment:**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Competence | | | **Practice** | | | | **Mastery** |
| Watching | **Copying** | **Starting** | | **Practising** | **Getting better** | **Got it!** | **Teaching** |
| I know what the use of the skill looks like when others are using it | I can copy someone else using the skill | I am starting to use the skill by myself | | I am using the skill by myself in familiar situations | I am getting better at using the skill in unfamiliar situations | I am able to use the learning skill whenever I need to | I use the skill without needing to think it through first |
| I can break the skill down into steps | I use the skill one step at a time | I am still conscious of using the skill one step at a time | | I am starting to put all the steps of the skill together | I can usually use the skill without referring to the way that I have done it in the past. | I can confidently use the skill without referring to the way that I have done it before | I am capable of teaching other students how to use the skill |
| When I try to use the skill myself I make lots of mistakes and ask lots of questions | I still make mistakes and ask for help but I am getting better at correcting my own mistakes | I can correct my mistakes with some help | | I can correct my own mistakes | Any mistakes I make I can quickly correct | I can usually correct any mistakes automatically | I correct any mistakes I make automatically |
| I need lots of help to use the skill | I can use the skill in familiar situations with some help | I still need help to use the skill sometimes | | I don’t need help to use the skill in familiar situations anymore | I still need help to use the skill in unfamiliar situations sometimes | I hardly ever need help to use the skill anymore | I can use the skill in unfamiliar situations without any help from anyone else |

**Student self-assessment of ATL skill development:**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Student Self-Assessment of ATL Skill Proficiency** | | | | | | | |
| **ATL Skill** | **Competence** | | **Practice** | | | | **Mastery** |
|  | **Watching** | **Copying** | **Starting** | **Practising** | **Getting better** | **Got it!** | **Teaching** |
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**Developing self-assessment as an ATL skill in itself:**

* Use self-assessment to teach students how to accurately judge the quality of their own output - the most important ATL skill for all future education and careers
* When assessing students’ subject work try:
  + asking them to include a self-assessment on what they did well and what they could improve on
  + give them feedback on both their subject work and the quality of their self-assessment

**Three valid forms of ATL skills assessment:**

* Student self-assessment of ATL skills proficiency completed pre~ and regularly post~ training
* Teacher reporting on ATL skills in reports – qualitative not quantitative
* Designing subject-based assessments so that generating the answers needed requires the use of specific ATL skills at the appropriate level of proficiency