MAC: THREE STEPS TO DESIGNING BETTER LEARNING EXPERIENCES

MAC: Map, Activate, Check

We perceive and understand the real world through mental models. Mental models include beliefs, biases, categories, preferences, theories, etc.

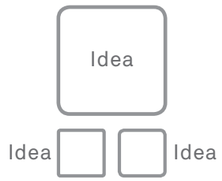
Our mental models describe reality with varying degrees of accuracy. Learning is the process of incorporating feedback from the real world and using it to adjust our mental model as needed.

1 Map the Mental Model (M):

Map any content and thinking students need to learn (i.e., build a mental model).

Being clear on what you want students to learn is the first step in effective teaching. Lack of clarity at this point will only multiply throughout the lesson and confuse learners as to the goal.

DSRP

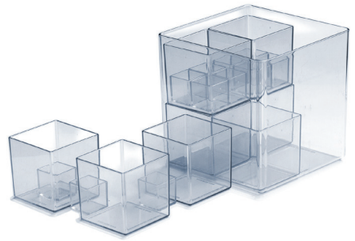


Construct a map (e.g., using MetaMap software) of the mental model that you want students to build, then share that mental model with your students, ideally having them help you complete it. This indicates to students they need to construct knowledge through thinking, rather than just the teacher covering information.

2 Activate the Mental Model (A):

Use an activity (see Activate a Concept) that best activates thinking by grounding to students' prior information and experience.

The function of an activity is to activate learning of the lesson/mental model you are teaching.



See the "*Activate a Concept*" infographic

3 Check the Mental Model (C):

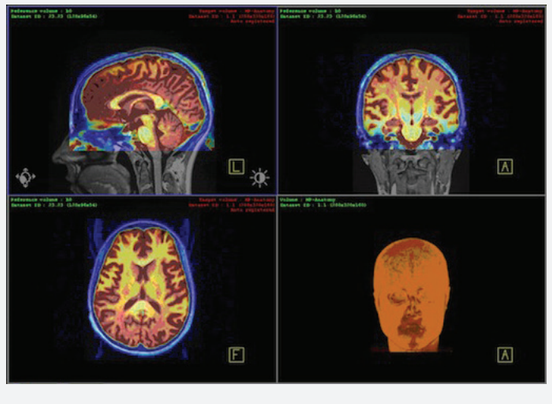
Use checks for understanding to ensure student has built the knowledge mapped and activated by the teacher.

Use a rubric (e.g., a metamap) that assesses student understanding of information and thinking. Are they building the mental model you mapped?

Embed multiple checks for understanding: pre-lesson (foreshadowing), within activities, and traditional post-lesson checks. Students should constantly check their own understanding through self-assessment and reflection.

Fractal—can be used at different scales—in a program, course, unit, lesson, teachable moment, or answering a question.

Utilizes brain science and systems thinking to foster optimal learning and promote metacognition and transfer across subjects



Based on the idea that our mental models (knowledge and skills) are made up of Information X Thinking

Requires correspondence between the lesson you map, the activity chosen to activate the lesson, and the method of checking it

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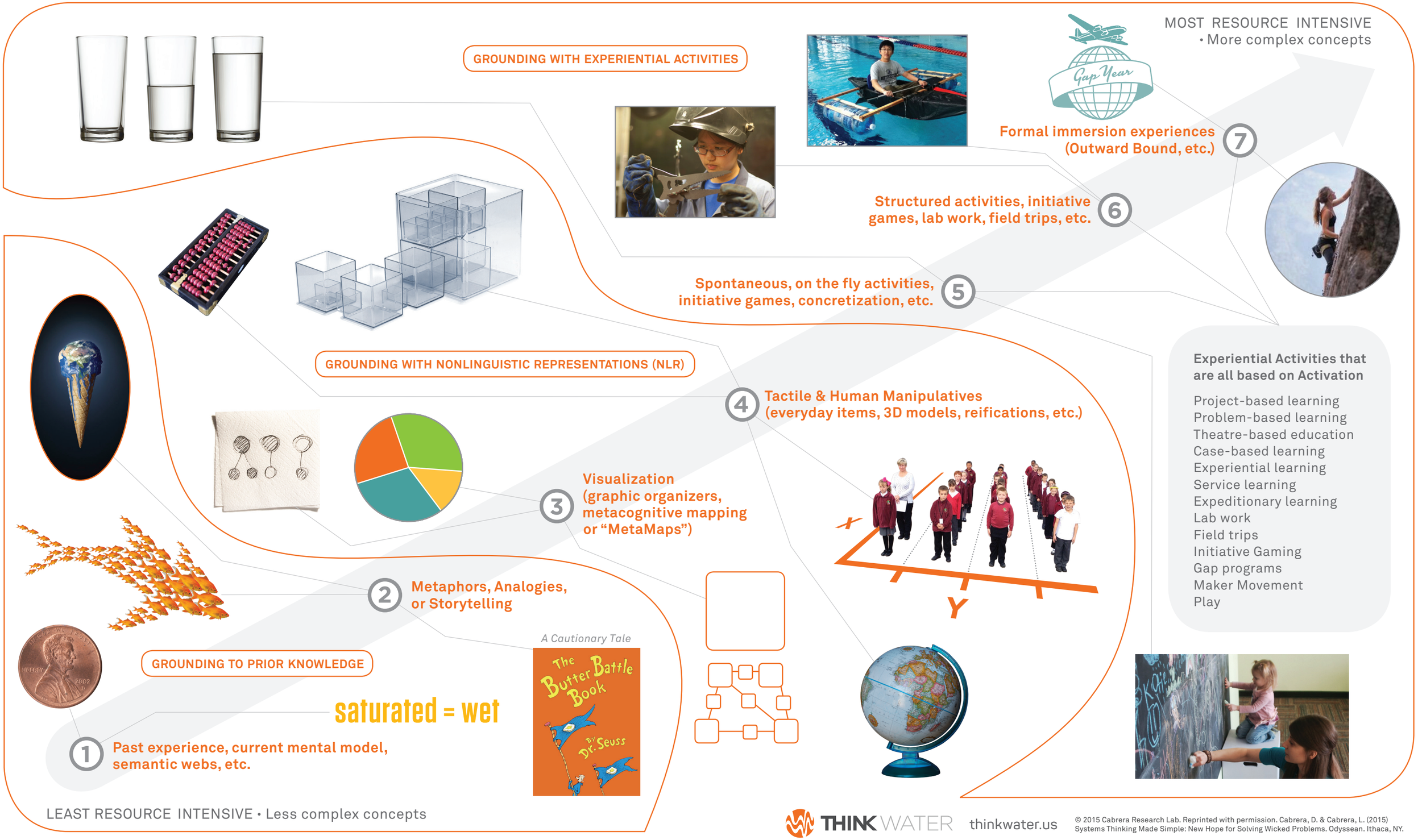
The purpose of an activity is to **ACTIVATE A CONCEPT**

The sole purpose of activities is to activate intentional learning of concepts on the part of students.
Use activities as part of MAC: M=map the lesson/mental model A=activate student learning C=check for understanding



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