
Cooking with the Wrong Ingredients
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Write down some ingredients
from your "Favorite Recipe" ☺

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The Disclaimer ☺

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Have you ever made something,
and the recipe didn't taste right?

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This ALSO happens in the classroom!

- Things start off with a "fireside chat" story…
- …then you must "teach back" to someone…
- …then the group plays a game (dice, cards)…
- …then you are asked to "share something"…
- …then the class has a dance celebration…

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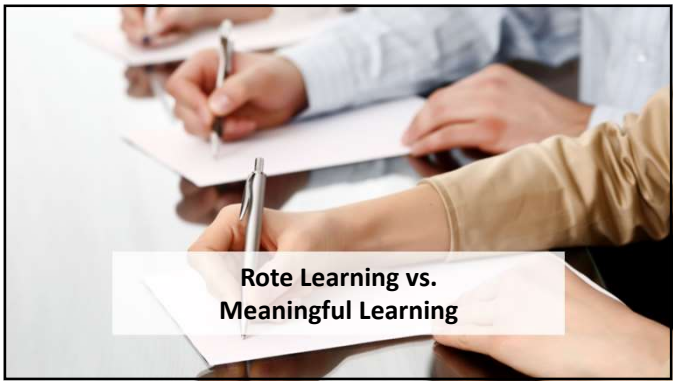

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Other combos that just "work" together

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Organizing your thoughts

The Learning Question

The Instruction Question

The Assessment Question

The Alignment Question

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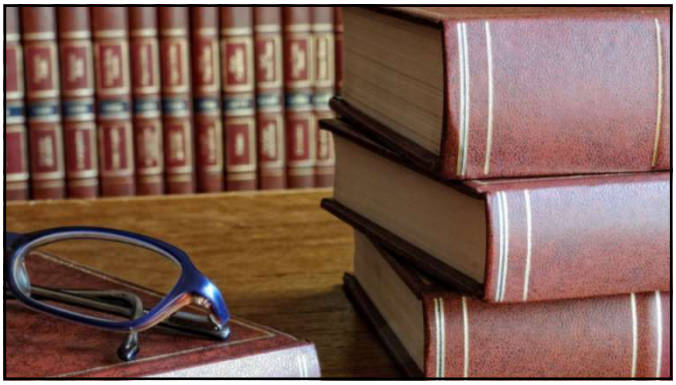

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The first question to ask yourself:

"What is important for students to learn in the limited school and classroom time available?"

"What is worth learning?"

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Choice #1: "Facts" – the building blocks

The basic elements that students must know if they are going to be acquainted with a topic or discipline, solve problems within it, and communicate with others about it.

What "Facts" could look like:

- Knowledge of the units of empirical measurement
- Knowledge of the major nutrition terms
- Knowledge of the major facts about regional food sources
- Knowledge of practical facts relevant to storing food safely

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The second question to ask yourself:

"How does one plan and deliver instruction that will result in high levels of learning for large numbers of students?"

"How will I share this?"

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Choice #2: Sharing the "Facts"

You **COULD** create slides, read from them, lecture for a while or tell *a story to students…*

…but what if **INSTEAD** you gave students source material for a "Game Show" activity?

Make sure to have the source material handy for these "Building Blocks"

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The third question to ask yourself:

"How does one select or design assessment instruments and procedures that provide accurate information about how well students are learning? "

"How can I tell if my teaching is working?"

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Choice #3 - checking a student's ability to "Remember"

#1 **Recognize**: Give your students **multiple choice test** with items like:

"How many food groups are recognized by MyPlate from USDA?
a. four, b. five, c. six, d. seven, e. ten

#2 **Recall**: Give your students **fill-in-the-blank test** with items like:

"Complete this statement:
"The MyPlate Daily Checklist is based off of 2000 calories per day"

https://www.myplate.gov/eat-healthy/what-is-myplate

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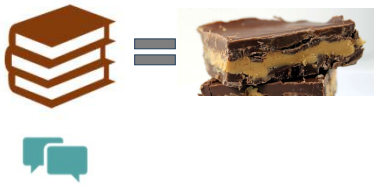
Remembering the Facts

Recognizing
or
Recalling



Engaging your brain to "Remember" these "Facts" is one of those combos!

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Remember to start here:

"What is worth learning?"

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Choice #1: "Concepts" – how things are related

Classifications and categories as well as the relationships between them that students use to understand how things are organized, connected, and function.

What "Concepts" could look like:

- Knowledge of the various food groups
- Knowledge of the types of food popular with particular cultures
- Knowledge of the principles involved in cooking proteins
- Knowledge of the structural organization of a well-balanced meal

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Next thing to think about:

"How will I share this?"

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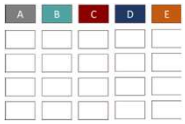
Choice #2: Sharing the "Concepts"

You **COULD** ask students to watch a video that explains the differences in some concepts…

…but what if **INSTEAD** you asked students to sort a stack of cards into the correct category?



Consider what prerequisite knowledge they would need – aka the "Facts"!

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Then you need to ask:

"How can I tell if my teaching is working?"

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Choice #3: Checking a student's ability to "Understand"

#1 **Exemplify**: Ask students a question to provide an example:

"Share an example of a vegetable and state why it is a vegetable."

#2 **Classify**: Give students an instance and ask them to produce its related concept or principle:

"For each picture of food, state which food group it is in and three attributes which make it part of that food group"

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Understanding the Concepts

Exemplifying
or
Classifying

Engaging your brain to "Understand" these "Concepts" is one of those combos!

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The first question

"What is worth learning?"

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Choice #1: "Procedures" – how to do something

Students often come to us looking for how to accomplish something, ways to inquire about something, and the criteria for determining which process or steps to use.

What "Procedures" could look like:

- Knowledge of the skills used to prepare a grilled cheese sandwich
- Knowledge of the methods used to create an egg-based dish
- Knowledge of the techniques used to prepare the evening meal
- Knowledge of the criteria for determining the best way to prepare a steak

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The second question

"How will I share this?"

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Choice #2: Sharing the "Procedure"

You **COULD** ask students to watch you demonstrate how to perform a sequence of steps…

…but what if **INSTEAD** you asked students to perform the steps *themselves* after a demo?

Handing students a "recipe" to follow DOES NOT mean they can cook!

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The third question

"How can I tell if my teaching is working?"

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Choice #3: Checking a student's ability to "Apply"

#1 **Execute**: Give students a familiar task to perform using a well-known procedure they have used before:

A student is given the formula to calculate the nutritional information by serving and must provide a set of answers for a meal made from scratch

#2 **Implement**: Give students an unfamiliar task to perform where they must select the appropriate procedure to use and then solve the problem:

Present students with a problem in which they must choose the most nutritious meals to support weight loss for a middle-aged adult

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Applying the Procedure

Executing
or
Implementing

Engaging your brain to "Apply"
these "Procedures" is one of those combos!

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Your Recipe: Part 1

1:00

Locate the "First Question" on the back of your worksheet

Write a few words about the knowledge you would share with your students

Next quickly review the types of knowledge (Factual, Conceptual, Procedural)

Circle which type of knowledge is closest to your first response!

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Your Recipe: Part 2

1:00

Locate the "Second Question" on the back of your worksheet

Write a few words describing the activity to teach your "Part 1" knowledge

Next, quickly review the Cognitive Processes listed next to your response

Circle which Cognitive Process might be engaged with your activity!

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Your Recipe: Part 3

1:00

Locate the "Third Question" on the back of your worksheet

Write a few words describing how you would check to see if students "got it"

Next, quickly review the assessment examples next to your response

Circle which question or activity would help you get feedback on your teaching

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What Objectives Are

Statements that describe something that a student will be able to do following the completion of a unit of instruction. They often state these desired behaviors using nouns and verbs.

"By the end of the school year, students will be able to…"

Blooms Taxonomy for Educational Objectives:

- "Objectives are explicit formulations of the ways in which students are expected to be changed by the educative process." – (Handbook, 1956)
- "When we teach, we want our students to learn. What we want them to learn as a result of our teaching are our Objectives." – (Revision, 2001)

Comprehensive Framework for Inst. Objectives:

- "Specific statements of behaviors students will be expected to have achieved by the end of a unit, course, or school year." – (Systematic Guide, 1977)
- "… they must do something other than sit in a book…must be an active, integrated part of the day-to-day teaching process." – (Systematic Guide, 1977)

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What Objectives are NOT

Instructors must differentiate Objectives from Instructional Activities and Assessment Tasks. How they are explicitly stated helps us determine one from another!

- **Objectives** – the 'ends': intended results, outcomes, and changes
- **Activities** – the 'means': reading a textbook, listening to a lecture, etc.
- **Assessments** – the tasks and activities used to get feedback on learning

A Taxonomy for Learning, Teaching, and Assessing – Anderson and Krathwohl (2001)

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A very common mistake…

Instructors need to avoid misinterpreting an objective as something that THEY THEMSELVES would perform or accomplish during the course – it's not about you ☺

Objectives are focused on the LEARNER and NOT on the INSTRUCTOR!

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Hopefully this has got you thinking! ☺

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To avoid this, you must ask yourself one more question:

"How does one ensure that the objectives, instructional activities, and assessments are consistent with one another? "

"Do the choices I made all line up?"

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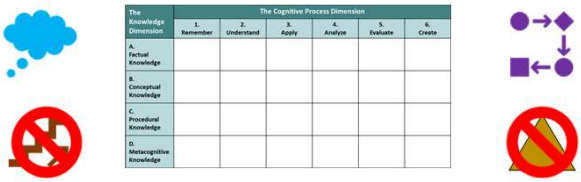
Bloom's Revised Taxonomy for Educational Objectives

A two-dimensional framework that illustrates the intersection of four types of Knowledge with six increasing levels of Cognitive Processes: Used to analyze design choices - Revised in 2001



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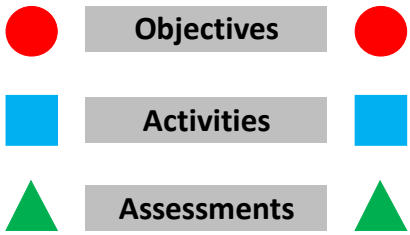
We use the Taxonomy Table to classify the following:



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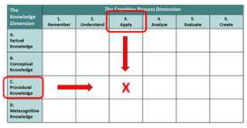
An example of Classification

Objectives contain a "Noun" and "Verb". The verb generally describes the intended Cognitive Processes. The noun generally describes the Knowledge that students are expected to acquire.

Objective: *"The student will learn to apply the reduce-reuse-recycle approach to conservation."*

This objective is placed in the cell at the intersection of **Apply** and **Procedural Knowledge**



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This tool is used to analyze educational design choices

The Knowledge Dimension	The Cognitive Process Dimension					
	1. Remember	2. Understand	3. Apply	4. Analyze	5. Evaluate	6. Create
A. Factual Knowledge	■■■ ▲▲	■■■		■		▲
B. Conceptual Knowledge		●●● ■▲▲				▲
C. Procedural Knowledge	▲		■ ▲▲			▲
D. Metacognitive Knowledge						

Visualizing your choices helps you identify the "combinations" that work!!

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Some intersections are "combinations" that are common



Common Intersections include:

- Remember Factual Knowledge
- Understand Conceptual Knowledge
- Apply Procedural Knowledge

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Looking at your worksheet, do your choices line up?

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Five Conditions for planning your Objectives

1. They should relate directly to YOUR students in YOUR classroom
2. They should be attainable by all students or a specified portion / percentage
3. They should be meaningful in terms of content: worth the student's time
4. They should be specific enough to guide lesson plans and assessments
5. They should be able to be understood by other educators / administrators

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Thank you!! – Bonus Takeaway

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For a summary of the information in this presentation go to this link:

https://www.sparkplugagility.com/f/Cooking

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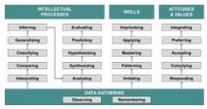

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