Purpose: Demonstrate how to teach to all dimensions when applying concepts to academic content. Include: all of the stages of instruction when developing the conceptualization of abstract ideas during lessons. Apply them to your lesson plans and the TPA document.

Teach the Stages of Conceptualization

DH TPE 1.2: ...engage with students using multimodal instruction (signed, spoken, and/or written) scaffolding, multiple ways of representing content, and teaching strategies to address the specific needs of student learning...

1. You will be assigned a basic concept from the list. (1 to 50).
2. Connect the selected concept to any academic content.
3. Create Stages 1-4 activities for the primary concept of the lesson.
4. Show how conceptual content supports academic depth in an aligned learning activity. (Use any curriculum resource to prompt new ideas.)
5. Team members are to interact and provide feedback regarding your work.

Discipline: Science Grade Level: 4-8

<table>
<thead>
<tr>
<th>Select a Basic Concept: Opposite</th>
<th>Curriculum Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesson topic: Natural Resources – Renewable &amp; nonrenewable</td>
<td>Project Learning Tree <a href="http://www.plt.org">www.plt.org</a></td>
</tr>
</tbody>
</table>

Concept: 4 Stages of Activities - Energy has opposite kinds of sources.

1. We can reproduce our sweat, but we can’t regrow a missing toe.
2. We can grow more trees & recycle paper products but we can’t make more copper ore.
3. (Include an example page if appropriate.) Explain why each side of the page is an opposite kind of resource.
4. Write: Fill in the blanks & and answer the question on the worksheet.

Work with team members and provide feedback.
Word list of opposites: https://www.enchantedlearning.com/wordlist/opposites.shtml
Select a Basic Concept: **Opposite**

Lesson topic: Things we touch and use can have opposite relationships. Hard is the opposite of soft.

Concept: 4 Stages of Activities

**Stage 1:** My forehead is **hard** and my ear lobe is **soft**. My teeth are **hard** and my tongue is **soft**. Hard and soft are opposite feelings. If my teeth were soft, I couldn’t chew. If my tongue was hard I couldn’t swallow.
My belly button and back are on the opposite sides of my body. Happy is the opposite of frown. When I relax my muscles are soft to the touch. When I am tense, my muscles get hard.

**Stage 2:** Put the hard toys together in one basket and the soft toys together in the opposite basket.
My bed is soft, the floor is hard.
The opposite of up is down. The opposite of right is left.
The classroom door is on the opposite side of the room from the windows.
The door opens in the opposite direction, push it, don’t pull it open.

**Stage 3:** (Include an example page if appropriate.)
Match the pictures for the opposite image and draw a line from one to the other.
If you are walking toward the school, you have to go in the opposite direction to get home.

**Stage 4:** Match the cards for opposites. Note that words are printed on the card with the pictorial representation.
How many times did the camper walk in the opposite direction from the “X”?
Rubric:

<table>
<thead>
<tr>
<th>Points</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>7</td>
<td>The task appropriately represents the concept.</td>
</tr>
<tr>
<td>0-1.5</td>
<td>Stage 1 the concept is directly applied to the body. Linear dimension of self.</td>
</tr>
<tr>
<td>0-1.5</td>
<td>Stage 2 represents only environmental, 3D practice activities.</td>
</tr>
<tr>
<td>0-1.5</td>
<td>Stage 3 represents only 2D, practice pictorial factors.</td>
</tr>
<tr>
<td>0-1</td>
<td>Stage 4 represents only abstract ideas &amp; the application of content.</td>
</tr>
<tr>
<td>0-1</td>
<td>Required reading &amp; writing tasks are only at Stage 4.</td>
</tr>
<tr>
<td>0-0.5</td>
<td>All detailed info is included and properly applied.</td>
</tr>
</tbody>
</table>