DESIGNING LEARNING TASKS

Name of Curriculum: _Motion and Design_

STEP 1: IDENTIFY OPPORTUNITIES IN THE CURRICULUM

Lesson and Page Numbers:

Pulling a Vehicle: Looking @ Force   p41

What is the <u>learning goal</u>?

Students will draw conclusions about the effect of differently weighted strings on the motion of their string-pulled vehicles.

What <u>data</u> will students either be given or collect to analyze?

The students will collect data of the movement of the vehicle Using (Record sheet 3A.) different size washers and amounts of washers.

What <u>scientific principle</u> will students use to link their claim and evidence?

Understanding that force applied to an object changes the motion of that object. (Netwon's Law Motion #1, 2)

STEP 2: DESIGN COMPLEXITY OF THE LEARNING TASK

For each of the following characteristics consider how simple or complex you want the learning task to be depending on the needs of your students.

What <u>question</u> will you ask students?

Does the weight of the washers ~~effect~~ change the ~~distance~~ speed of the vehicle.

What <u>specific data</u> will you either provide students or have students collect?

Data from Record Sheet 3A Comparing movement of vehicle with #'s of washers.

How <u>much data</u> will you have students analyze?

5 trials.

**What <u>variation of the framework</u> do you want students to include in their response?**
For example – complexity of the evidence, complexity of reasoning and inclusion of rebuttal

Variation 1

STEP 3: CREATE CLASSROOM SUPPORTS

Do you want to include any type of <u>visual representation</u> in your classroom? If yes, describe or sketch the representation.

GRAPHIC ORGANIZE THAT BREAKS DOWN VARIATION

CLAIM °/○

EVIDENCE °/○

REASONING °
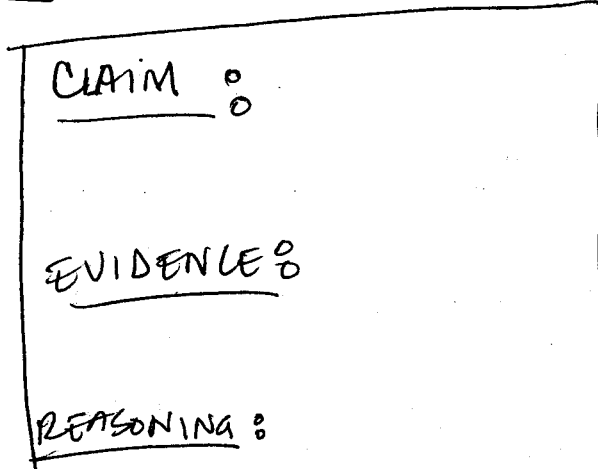
Do you want to provide students with <u>curricular scaffolds</u>? If yes, draft the scaffolds below.
Consider – content specific, generic or combination AND level of detail to include

• MODIFIED VOCABULARY

• VISUALS =

    FOR EXAMPLE °

○ SAMPLE VARIATION POSTER

○ MODELING

◎ = washer