

**Learning Activities Rubric**  
**Wesley College Department of Education**  
 (Assesses teacher candidates' ability to plan learning activities)

Teacher Candidate: \_\_\_\_\_ Date: \_\_\_\_\_

Evaluator: \_\_\_\_\_ Subject: \_\_\_\_\_

To evaluators: Use this rubric to evaluate lesson plans.

Identify the level of the plan: individual lesson, unit plan, intradisciplinary theme, interdisciplinary theme.

*\*Key to 5 point rubric scale:*

*1= no evidence of indicator, needs improvement*

*2= some evidence of indicator, but needs improvement*

*3= acceptable evidence of indicator*

*3.5 = cut score for programs*

*4= regular evidence of indicator*

*5= exceptional evidence of indicator*

**Level of content summary (circle one):** individual lesson, unit plan, intradisciplinary theme, interdisciplinary theme.

**1. Activities Content**

A. Have materials for student examination that exemplify the content to be learned	1	2	3	4	5
B. Clearly reflect a social constructivist framework and follow one of the four inquiry-based lesson types (content presentation, concept attainment, concept Formation, student-generated investigation)	1	2	3	4	5
C. Have descriptive knowledge events that: Activate appropriate student background knowledge (set) Prepare students to learn new content (advance organizer) Present "data of the lesson, and orient students in how to use it.	1	2	3	4	5
D. Have transformational knowledge events that: Engage students in analysis of data organized from the learning materials Facilitate and assess student interpretation of the data Have explanatory knowledge events that: Facilitate and assess student explanations that are clearly generated from analysis and interpretation of the data extracted from the learning materials Present new data for students to explain in terms of newly constructed knowledge.	1	2	3	4	5
E. Have evaluative learner events that: Engage students in evaluation of their knowledge construction process. Facilitate students situating the new knowledge into a more inclusive framework.	1	2	3	4	5

## 2. Differentiated Instruction and Accommodation

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| A. Activities and materials address a range of student abilities and learning styles | 1 | 2 | 3 | 4 | 5 |
| B. Activities reflect use of multiple resources including appropriate technology.    | 1 | 2 | 3 | 4 | 5 |

## 3. Written Plan

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| A. Lesson procedures are clearly written with sufficient detail                       | 1 | 2 | 3 | 4 | 5 |
| B. All specified steps of the lesson plan are included and in the appropriate order   | 1 | 2 | 3 | 4 | 5 |
| C. Plan includes a list of materials to be used including copies of all data sources. | 1 | 2 | 3 | 4 | 5 |
| D. Plan is "classroom ready"  | 1 | 2 | 3 | 4 | 5 |

## Learning Activities Scoring Guide

	1	2	3	4	5
<b>Learning Activities</b>	No data sources are listed, no attempt to use constructivist learning models. Not passing. Needs major revision	Plan has missing components and unclear descriptions of teacher and student roles and actions in the learning activities; Plan might show attempt at use of one of the four instructional models, but is inaccurate, with steps missing (lacks flow). Needs major improvement to meet minimum course requirements.	Plan is clearly constructivist, using one of the four models, but not necessarily appropriate for content; plan includes data sets that are acceptable, but not representative of content in all cases, and there are mismatches between the activity and the level of procedural knowledge. Meets minimum course requirements, but needs major revision to be classroom ready.	Plan is clearly constructivist using one of the four models appropriately for the content; activities address most indicators and with some revision, is classroom ready	Plan is clearly constructivist, using one of the four models appropriately for the content; activities address all indicators and is classroom ready
<b>Differentiated Instruction and Accommodation</b>	No attempt at differentiation	Data sets show an attempt at general differentiation of instruction. Needs major improvement to meet minimum course requirements.	Plan includes data sets that exemplify the content and are accessible to most students; activities provide general opportunities for most students to construct personal meaning, with few accommodations. Meets course criteria, but not classroom ready	plan includes well chosen data sets that are accessible to all students and exemplify the content; activities provide opportunities and accommodations for most students to construct personal meaning but no specific accommodations are noted. Classroom ready with some modification	plan includes a well chosen variety of data sets that are accessible to all students and exemplify the content; activities provide opportunities and specific accommodations for identified students to construct personal meaning. Classroom ready
<b>Written Plan</b>	No apparent attempt to specify steps. Devoid of detail. Not passing, needs major revisions.	Few steps are specified, no apparent order and insufficient detail to be followed. Needs major improvement to meet minimum course requirements.	Most steps are specified, but not in order; major revision with additional detail is needed to be easily followed. Meets course requirement, but not classroom ready	All steps specified, in correct order, but may need more detail to be easily followed by another. Classroom ready with some modification	All steps specified, in correct order, and written in sufficient detail as to be easily followed by another. Classroom ready

## **Guide to Writing Constructivist-Based Learning Activities**

Learning Activities must include a connected set of events within a lesson or unit of study that will connect learners to the declarative knowledge objectives of the content summary. When you write your activities, they should be richly described so that it is evident that you will be able to engage all students in active knowledge construction through authentic inquiry.

There is a specific sequence to the learning events or activities. The sequence is designed to cover a hierarchy of knowledge construction activities that reflects student engagement in authentic inquiry. These are:

- 1 - Introductory Activities (set and advance organizer),
- 2- Descriptive Knowledge Activities,
- 3- Transformational Activities,
- 4- Explanatory Activities, and
- 5- Evaluative Activities.

### **1. Introductory Activities**

To begin engagement, you must have two essential events: A Set, and an Advance Organizer (after Ausubel).

The set is a teacher-directed event that asks students to review their existing knowledge. The advance organizer sets the learner up to learn by presenting a “road map” of what students will learn and how they will learn it. Here is an example of a set from an outreach lesson on whales:

*Set:*

*Teacher holds up a picture of a whale . “Is this a fish? Why or why not? “*

Here is an example of an advance organizer from the same lesson:

*Advance Organizer:*

*“Today we are going to learn more about whales, and find out why they are not fish. We are going to learn how to recognize the different types of whales by their special behavioral, anatomical and physiological adaptations, and learn about the importance of whales in marine ecosystems.” (Teacher should post focus questions that have the underlined target concepts – adaptations, ecological niche).*

The advance organizer names, but does not EXPLAIN the target concepts. The advance organizer should also be the event that poses the focus questions for the unit or lesson. Students will refer to these focus questions when they are engaged in the various levels of knowledge construction.

### **2. Descriptive Knowledge Learning Activities**

To actively construct knowledge, your students must first generate personal, rich descriptive knowledge, using “data sources” that you have chosen. The “data sources” must be, or contain, clear exemplars of the concepts and principles to be learned.

*For example, in the Whale lesson plan, the data sources are two posters, one that clearly displays the parts of a whale, with removable labels that have descriptions of the part on the back of the label. One poster with a dichotomous key for classifying whales and accompanying pictures of whales (no names on them); A variety of identification guides for marine mammals; a K-3 book titled “Katie the Whale”; and a set of newspaper clippings about the decisions of the recent meeting of the world whaling commission.*

Notice that the data sources are NOT the materials that usually accompany a lesson or unit plan. They are, rather, the primary knowledge resources the student will use in the learning activities. A set of questions or instructions should be provided with all data sources to guide students in extracting and recording relevant factual information from each. The questions and instructions should be open-ended rather than prescriptive, in a step-wise, “cookbook” fashion. (ACEI standards 3.2, 3.3)

### **3. Transformational Learning Activities**

Once students have extracted and recorded the critical descriptive data (these are the “facts” that are relevant to construct the essential concept or principle) from the data sources, you must design transformational activities that engage students in analysis of their descriptive knowledge. Transformational learning activities can be a series of questions that focus students on the critical aspects of the data. They can be an event in which comparisons and categories are created by students using the data, or an event in which data tables or graphs are constructed for interpretation and generation of explanation. The analysis activities can be highly variable. But transformational activities must engage students in organizing or categorizing (transforming) their descriptive data.

*In the whales lesson, students might examine pictures of whales and determine how they are the same and different. The categories developed might be: head shape, mouth parts, flukes, tails, etc.*

### **4. Explanatory Learning Activities**

You must have activities in this area that get the learner to generate and use explanations derived from their transformations. First, activities must engage the learner in generating explanations that answer the focus questions. These explanations may be close to the original data sources and their transformed meaning. But to truly see if students can utilize the newly constructed explanations, a second activity or set of activities, in which new or unfamiliar data or cases are presented, should be presented to the students to see if they can generate explanations or evaluate the new data for explanatory “fit” ... in other words a situation should be given where the new knowledge can be applied appropriately.

*In the whales lesson, students should notice that the mouth parts of a whale are an adaptation related to their food sources. That’s an explanation. You could then give them pictures of a whale they have not seen and ask them to tell what they know about the whale. They must justify their answers.*

## **5. Evaluative Learning Activities**

In a constructivist learning environment where students engage in knowledge construction through the inquiry process, it is critical that learners become skilled at reflecting their knowledge construction skills with the ultimate goal of self-direction in their learning. Also, it is essential that learners are able to frame and situate their knowledge into larger, or “real world” contexts. Evaluative Learning activities should be designed with that in mind.

*In the whales lesson, students might be guided to ask questions about other animals and their food sources. Individuals or small groups could engage in their own inquiry to find the answers.*

Here are two examples of complete lesson plans from language arts and science that have all of the descriptive, transformative, explanatory and evaluative learning activities described in the third Learning Activities Section. These two examples illustrate the three components of the written curriculum and how they are related.

### **Example One: A Lesson Plan from a Unit on Force and Motion**

Interdisciplinary Theme: Structure, Change, Balance (Refer to Content Summary)

Science Theme: Equilibrium and Balance (Refer to Content Summary)

#### Lesson Content Learning Objectives (from unit content summary)

1. An object will float in water if the buoyant force of the water pushing up on the object equals the pull of earth’s gravity on the object. (BALANCE)
2. Increasing the area of the object that contacts the water will increase the amount of buoyant force exerted on the object (CHANGE). If the surface area of the object contacting the water is sufficient, i.e. the buoyant force pushing up on an object is equal to the force of gravity pulling down on the object, then the object will float.(BALANCE)
3. Buoyant force is a property of all fluids.

#### Learner Outcomes:

Through examination of the characteristics of things that float and sink in water, students will be able to:

- 1- Create directional diagrams of the forces being exerted on any object in a fluid that accurately and validly represent the relationship between the magnitude of the forces on the object, the shape of the object, and its position in the water or air
- 2- Explain floating and sinking using the concepts of at-a-distance (gravity) and contact (buoyant) forces, and distinguishing between the two when describing floating or sinking of objects in water.
- 3- Describe objects that float as experiencing balanced forces

#### Learner Events/Activities : (Grades 1-3)

SET

1. Show students a ping pong ball and a feather and ask them what will happen if you drop both in air?

2. Then hold them over the tank of water and ask them what will happen if you drop each in the in water? OR
3. Ask, Who has seen big ships carrying huge loads of cargo across the ocean? Who has seen giant airplane take off and land? Are the ships and planes heavier than the air and water they move through? Did you ever wonder how they can do that?
4. Find out what they already know about gravity by asking them why the feather and ping pong ball fell...but one fell slowly and the other fell more quickly.

#### ADVANCE ORGANIZER

1. Tell students that for the next few lessons, they are going to spend time investigating what makes some things FLOAT in water (or air), and other things SINK. During their investigations they will be developing an explanation of what makes objects move or stay at rest.
2. They will also be investigating how objects that are heavier than air and water can be made to float rather than sink. Because of this investigation, they will understand the relationship between FORCES and the MOTION of OBJECTS.
3. Place the following Focus Questions on the board or post in the classroom while the activities are going on.
  - 1) Why do some things float in water and others sink?
  - 2) How can an object that sinks in water be changed to make it float in water?

#### DESCRIPTIVE KNOWLEDGE ACTIVITIES

##### Data Sources:

1. Teacher explanation and illustration of critical concepts;
2. Student data sheets that list objects to be tested and record outcome of placing in water;
3. Focus questions for the lessons. – (should be attached to this lesson plan).

Data Presentation: Mini-content presentation on objects “at rest” (floating) and “in motion” (sinking) to set up the first observational activity.

1. Distribute data sheets with list *and* pictures of objects (marble, ping pong ball, golf ball, sponge, toy boat, Styrofoam peanut, etc.) and water tanks – should already be in place, 1 per pair of students, but each with own data sheets and *pencils*.
2. Show students how to gently set the object on top of the water, and observe it until the teacher says “times up”.. Teacher should give each object about 20 seconds (she/he is the only timer).

##### Data Recording:

3. Students should decide whether the object they were observing during the time was floating (at rest) or sinking ( in motion) and check the appropriate column of the data sheet.

#### TRANSFORMATIONAL ACTIVITIES

##### Data Analysis:

4. Teacher should ask the students to look at the list of floater and sinkers and try to figure out the common characteristics of the objects in each category.

#### Data Interpretation:

5. Teacher should ask students to state their rules and support the “rule” with the whole group that things that sink are heavier than water (not the biggest things, but the heavier things). What force pulls the objects down? What force pushes the objects up?
6. Teacher should put diagram of water molecules on board and draw arrows to model balanced and unbalanced forces.
7. Teacher names gravity as an at-a-distance force and buoyancy as a contact force, and does a quick illustration of each.. back to the feather and ping pong ball.

#### EXPLANATORY ACTIVITIES (knowledge claims)

8. Students should go back to their floaters and sinkers, pick one of each, and draw their own arrows, with little arrows meaning less force and longer arrows meaning more force.
9. Teacher should have children verbally or in writing explain in terms of balanced and unbalanced forces why an object would sink or float when placed in water.

#### EVALUATIVE EVENTS (Value Claims)

(Extending) event (sets up focus questions for next lesson)

10. Teacher produces toy boats, puts marbles into them..
11. Teacher asks children why the marble now floats...
12. Teacher asks students to see how many marbles they can get into the boat, and what happens to the boat when it sinks.
13. Teacher asks students to design a boat that will hold the most marbles and not sink?
14. Teacher asks students to decide what makes a good boat design.. i.e.... what do the boats that hold the most marbles have in common (the amount of surface area of the object in contact with the water).

### **Example 2: A Language Arts Lesson as Part of a Topical Unit on Genre of Literature**

Content Area: Language Arts, third grade

Language arts theme: Literature can be categorized by genre

Lesson Content Learning Objectives: Realistic Fiction

1. Stories that have not happened but could happen are called realistic fiction.
2. The characters are true to life, but not real people.
3. The settings are real or could be real.
4. The plot is plausible though not actually a true event.
5. The themes are consistent with the events and activities that happen to real people.

Learner Outcome and Assessment:

Students will demonstrate understanding of the qualities of realistic fiction.

Measured by ability to label books in current reading log by genre and justify their answers.

Learner Activities: (concept formation)

Materials/ Data Sources: variety of picture books for children, all realistic fiction

1. Tell children, “We’ve been looking at nonfiction books as we study habitats in science. Who can tell us what nonfiction books are?” (set)



2. "Today we will be talking about fiction and one particular kind of fiction called, realistic fiction." (advance organizer)
3. Put children in groups and give each group a pile of realistic fiction books. Tell them that these are realistic fiction. Ask them to look at the books and try to decide what they all have in common. (data set, descriptive knowledge)
4. As children work, circulate and prompt students as necessary to look at the literary elements as a way of organizing the data. Ask questions such as, "What about the characters?" "What do you notice about the plots?" Etc.
5. When children have finished, call the whole group together. Help them create a chart of the important characteristics of realistic fiction -- plot, characters, theme, etc..
6. Tell children that during reading workshop today, they must locate and label two books in their reading log that are realistic fiction and write a written justification for their answers using the chart above. (assessment)