Learning Goals and Experiential Learning

Learning Goals (a.k.a. objectives): a statement describing what students will learn

Why use learning goals?

- Gives your activity purpose
- Focuses your activity on something specific
- Provides structure to an activity
- Tells youth what they will learn from the activity
- Creates a lasting impact on youth learning
- Shows you if you successfully taught (and if the youth learned what you) wanted them to learn.
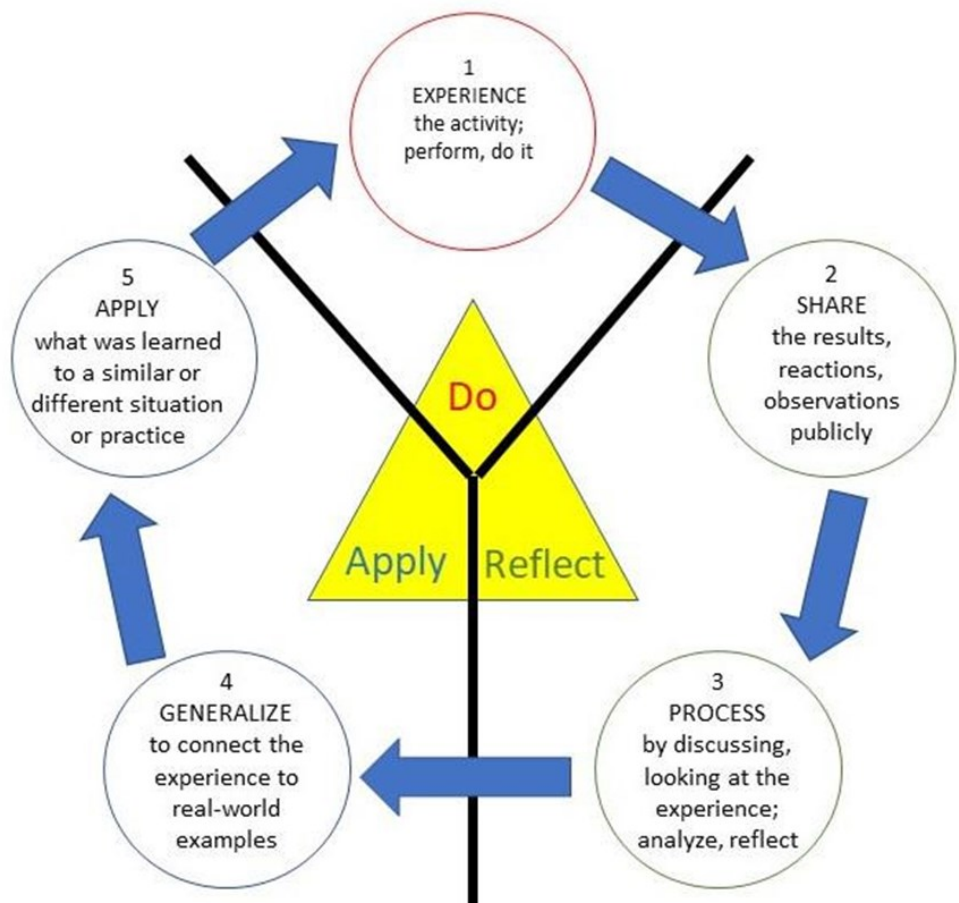
How to write and use a learning goal:

1. Brainstorm content (vocabulary terms, concepts and/or skills) you'd like youth to learn from the activity. Refer to the activity write up and standards for ideas.

2. Pick one or two of the most important.

3. Write a sentence describing what you want the youth to learn from the activity. Start your sentence with the "SWBAT" tool; "Students will be able to…"

4. Make the next word in your sentence a verb. The verb should be observable (something you can see or hear), not just "know" or "understand." See the next page for a list of observable verbs sorted into categories based on Bloom's Taxonomy, an education theory developed by Benjamin Bloom in 1956, revised in 2001.

5. End your sentence with the learning content you picked in step 2.

6. Your learning goal should be formatted: "Students will be able to [observable verb] [learning content]."
   E.g. Students will be able to build a vibrobot with a closed circuit. Students will be able to describe the electrical circuit that makes the vibrobot vibrate.

7. Use the learning goal to plan your activity. Every step of the activity should support the learning goal. Plan discussion questions or prompts that help guide students toward the learning goal.

Do, Reflect Apply

"Do, reflect, apply" is 4-H's simplified version of the experiential learning model, first published by educational theorist David Kolb in 1984

During the "experience" step, youth **do** a STEM activity and the facilitator introduces learning content (vocabulary, concepts and/or skills). In steps 2 & 3, youth **reflect** on their experience and what they learned. They **apply** this experience and their learning by making connections to their lives and futures (steps 4 & 5). This process helps cement the learning and make it relevant to youth's lives. Youth can also apply their learning by tinkering with their projects to make them better or get a different outcome, bringing them back to the **do** step in the model. These steps can be followed in order, or scattered throughout the activity.

1 EXPERIENCE the activity; perform, do it

2 SHARE the results, reactions, observations publicly

3 PROCESS by discussing, looking at the experience; analyze, reflect

4 GENERALIZE to connect the experience to real-world examples

5 APPLY what was learned to a similar or different situation or practice

Do — Apply — Reflect

(Revised) Bloom's Taxonomy of
LEARNING OBJECTIVES

KNOWING or REMEMBERING	COMPREHENDING or UNDERSTANDING	APPLYING	ANALYZING	SYNTHESIZING or EVALUATING	CREATING
Cite	Arrange	Adapt	Analyze	Assess	Adapt
Define	Associate	Apply	Appraise	Assemble	Anticipate
Draw	Classify	Compute	Detail	Build	Collaborate
Enumerate	Convert	Coordinate	Determine	Choose	Combine
Find	Describe	Demonstrate	Calculate	Compare	Communicate
Label	Discuss	Develop	Categorize	Construct	Compose
List	Explain	Dramatize	Classify	Debate	Construct
Locate	Exemplify	Employ	Compare	Estimate	Create
Match	Identify	Establish	Contrast	Formulate	Design
Memorize	Interpret	Examine	Correlate	Generate	Facilitate
Name	Locate	Extrapolate	Critique	Hypothesize	Forecast
Recall	Match	Illustrate	Defend	Integrate	Generate
Recite	Paraphrase	Implement	Detect	Judge	Initiate
Record	Report	Instruct	Dissect	Justify	Model
Recognize	Research	Interview	Distinguish	Manage	Negotiate
Select	Sort	Manipulate	Examine	Organize	Organize
State	Summarize	Modify	Inspect	Predict	Perform
Tabulate	Translate	Operate	Inventory	Prescribe	Plan
		Order	Research	Prepare	Produce
		Practice	Solve	Prioritize	Propose
		Predict	Summarize	Produce	Reconcile
		Prepare	Test	Propose	Revise
		Produce		Recommend	Resolve
		Utilize		Structure	Structure
				Synthesize	Substitute

Teaching Strategies	Teaching Strategies	Teaching Strategies	Teaching Strategies	Teaching Strategies	Teaching Strategies
Lecture	Questions	Practice	Problem solving	Projects	Simulations
Video	Discussion	Demonstrations	Case Studies	Problem solving	Critiques
Illustrations	Review	Presentations	Critical Incidents	Case studies	Complex case study
Examples	Test	Projects	Discussion	Plan development	Design/development
Visuals	Reports	Role play	Questioning	Constructing	Product generation
	Exercises	Micro-teach	Test	Simulation	Producing

Lower order thinking → → → **Higher order thinking** →

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Bloom, B.S. (Ed.). Engelhart, M.D., Furst, E.J., Hill, W.H., Krathwohl, D.R. (1956). Taxonomy of Educational Objectives, Handbook I: The Cognitive Domain. New York: David McKay Co Inc.