South Dakota State University Extension

Selecting Quality Activities

Need to mix things up a bit? Looking for a themed activity? A quick Google search can easily provide an overwhelming number of ideas that are flashy and fun. But do they contain the elements of a quality activity?

To be characterized as quality, an activity should include the following elements.

❑ Learning Goal

Every activity should have a learning goal or objective at its base.

- Learning goals can be related to:
  - Content and Knowledge
  - Life Skills
    - Problem Solving, Leadership, Communication, Teamwork, etc.
  - STEM Practices
    - Asking Questions, Planning and Carrying Out Investigations, etc.
- Learning goals often contain the phrase 'youth will be able to:
  - Know/Remember'
  - Comprehend/Understand'
  - Apply/Create'
  - Analyze/Evaluate'

❑ Materials

Materials play an important role in making an activity exciting and engaging. When reviewing the materials required for an activity, consider the following items:

- Are the materials developmentally appropriate for the audience?
- Are the materials accessible for all youth? (i.e. left-handed scissors for left-handed youth)
- Will the youth be able to easily use the materials? If not, will there be assistance available to them?
- Are the youth familiar with the materials, or will they require an introduction to them?
- Are the materials safe, or are special safety precautions needed?
- Do the materials support the learning goal?
- Are materials readily available?
- Are materials affordable?

❑ Engagement

Looking for activities that provide engagement tends to be one of the easier things. However, there is more to fostering engagement than the 'fun' factor. Activities should engage youth not only in hands-on exploration, but they should also encourage curiosity and cognitive work (minds-on). Some ways that activities support both hands-on and minds-on engagement are:

- Whenever possible allow youth to experience things for themselves.
- Facilitate learning rather than provide answers. This can be done by asking questions and supporting inquiry.
- Allow youth to examine, manipulate, test and try out ideas.

❑ Connection

When youth recognize and connect with elements of an activity, it enhances their ability to engage with it. These connections can be built through:

- Phenomena, or real world events that are observable by the youth. Phenomena engage youth by connecting to their interests, identities, backgrounds and prior experiences.
- Career Connections are a valuable addition to any activity. It not only provides a real world connection but it supports youth in career exploration.

❑ Reflection

Reflection time is an element that is often skipped during informal education; however, it is one of the most valuable learning opportunities for youth. By reflecting upon the activity youth strengthen their understanding of the content and become better communicators. Reflection is often built into the end of an activity, but that does not mean it cannot happen throughout its entirety.

❑ Exploration of Science Practices and Development of Life Skills

Science practices play a vital role in inquiry and experiential learning. These practices foster the development of many life skills and can be built into a wide array of activities (not just STEM activities) through encouraging curiosity through investigations, using tools and practices of specific STEM fields. Some STEM practices are:

- Asking questions and defining problems
- Developing and using models
- Engaging in arguments from evidence
- Constructing explanations and designing solutions
- Planning and carrying out investigations

❑ Based on Your Understanding of the Concepts Above, Rate Activities Using the Following Criteria

1. Needs major adaptations before teaching
2. Needs some adaptations
3. Suitable
4. Exemplary for this criterion

____ Does activity move youth toward a learning goal?
____ Does activity utilize materials that are comfortable and safe for youth to utilize?
____ Does activity utilize materials that will help youth reach the STEM goal and keep them engaged?
____ Does activity allow ALL youth to actively participate in the lesson?
____ Does activity provide youth with the opportunity to manipulate materials and interact with the lesson?
____ Does activity relate content to their personal lives and/or STEM careers?
____ Does activity provide opportunity for reflection and sharing?
____ Does activity engages youth in the Scientific and Engineering Practices and development of?

If the activity scores less than three for three or more of the above criteria, consider using a different activity or rewriting it to improve it for those low scoring criterion.