

organize and plan their solutions, construct arguments and justifications, and evaluate their products.

Within science education, Llewellyn (2007) has identified four types of inquiry-based questions to use with students (Table 1). Clarifying and focusing questions can be used when students give vague or general explanations. They encourage students to narrow their answers and make their thoughts more explicit. Probing questions can be used to encourage students to support, justify, or analyze their descriptions. Prompting questions assist students in coming to a particular conclusion that guides their work (Llewellyn 2007).

Inquiry-based questions are designed to be asked within a dialogue with students. Inquiry questioning involves the teacher responding to students' statements or actions with questions for students to follow up on (van Zee and Minstrell 1997). This pattern of questioning and response promotes student understanding and can assist the teacher in exploring student ideas (Mortimer and Scott 2003). Student responses are used as a platform for advancing inquiry, and the questioning can help bridge a gap in student understanding (Chin 2007).

However, some studies have pointed to limitations in using question prompts. For example, Greene and Land (2000) found that question prompts were not always sufficient due to students' superficial engagement or omission of questions. Similarly, Ge and Land (2003) found that some students ignored question prompts. Lack of prior knowledge may also prevent students from being prompted by questions. In cases such as these, the teacher may have to incorporate a more dynamic scaffold, such as peer interaction or a model from which students can make connections (Ge and Land 2004).

Creative Product and Process

Although there is no universally accepted definition of creativity, most recent conceptions define it as the ability to generate products that are novel (i.e., original) and appropriate (i.e., useful) within a specific sociocultural context (Plucker et al. 2004; Sternberg et al. 2005). Creativity can vary within contexts, which means that a creative product in one context might not be considered creative in another context (Plucker et al. 2004). These variations in creative

Table 1 Llewellyn's (2007) four types of inquiry-based questions

Types of questions	Uses	Examples
Clarifying questions	Encourage students to make thoughts and understandings more explicit when they have not provided a reasonable explanation.	What do you mean by that? Can you be more specific?
Focusing questions	Encourage students to narrow answers and be more specific when they have given vague or generalized explanations.	Can you give me an example of that? What pattern do you see?
Probing questions	Encourage students to provide more evidence to their explanations by justifying, supporting, analyzing, or giving cause and effect descriptions. They are used when students have provided a partially explained answer.	What are you thinking about when you say that? What do you think you should do next?
Prompting questions	Encourage students to come to a particular conclusion through clues or hints. They are used to guide students into thinking about a question or topic in a more focused way.	What can you do to make it fall faster? Have you thought about...?