

EVALUATING AND ASSESSING

Design Thinking: Potential Areas of Assessment

	Underdeveloped	Limited	Proficient	Exemplary
Safety Tool and Machine Operation	Group members needed constant reminders of safety rules/protocols or proper tool and machine operation.	Group members needed frequent reminders of safety rules/protocols or proper tool and machine operation.	Group members needed few reminders of safety rules/protocols or proper tool and machine operation.	Group members needed no reminders of safety rules/protocols or proper tool and machine operation.
Materials Management	Group members needed constant reminders to clean areas, to return tools, or to properly replace materials. Group members did not use materials efficiently and therefore wasted them.	Group members needed infrequent reminders to clean areas, to return tools, or to properly replace materials. Group members did not use materials efficiently and therefore wasted them.	Group members needed few reminders to clean areas, to return tools, or to properly replace materials. Group members use materials efficiently and waste none.	Group members needed no reminders to clean areas, to return tools, or to properly replace materials. Group members use materials efficiently and waste none.
Relevant Research and Exploration	The team does not conduct relevant research nor explore the topic nor make observations in order to enhance the knowledge base related to the project.	The team conducts limited relevant research or makes cursory observations to enhance the knowledge base related to the project.	The team conducts solidly relevant research and makes keen observations in order to enhance the knowledge base related to the project.	The team conducts deeply relevant research and makes keen observations in order to enhance the knowledge base related to the project.
Idea Finding	The team identifies the problem with considerable adult help, for reasonable ideas to pursue.	The team identifies the problem with some adult help, and has several reasonable ideas to pursue.	The team independently identifies the problem and has several ideas to pursue.	The team independently identifies several reasonable problems to pursue and ranks or evaluates the ideas as well.
Time Management	The team needs adult help to develop a project timeline. Team members have difficulty outlining project milestones that need to be included on the schedule. The group struggles with project deadlines.	The team independently creates a project timeline. Team members outline project milestones that need to be included on the schedule. The group struggles with identifying project deadlines.	The team independently develops a timeline describing when most parts of the work are done. All members can independently describe the project milestones. The team meets most project deadlines.	The team independently develops a reasonable timeline describing when all parts of the work are done. All members can independently describe the steps of the process. All deadlines for the project are achieved.
Linking Content and Concepts	The team has no clear way of linking, organizing, and communicating the content and concepts that they are responsible for researching nor connecting that information to their project. Members cannot independently connect information that is gathered to design plans and ideas.	The team has a formative way of linking, organizing, and communicating the content and concepts that they are responsible for researching, and connecting that information to their project. Most members cannot independently connect information that is gathered to design plans and ideas.	The team has a clear way of linking, organizing, and communicating the content and concepts that they are responsible for researching, and connecting that information to the project. Most members can independently link to and explain research content of the overall project.	The team has a clear, detailed, and engaging way of linking, organizing, and communicating the content and concepts that they are responsible for researching, and connecting that information to the project. All members can independently link to and explain research content of the overall project.

<i>continued</i>	Underdeveloped	Limited	Proficient	Exemplary
Drawings/ Scaled	Drawing doesn't show detail. Scale and measurements are inaccurate or incomplete. Component parts of the object in the drawing are not labeled. The drawing is not neat and in a final form.	Drawing possesses emerging detail. Scale and measurements are inaccurate or incomplete. Some component parts and materials of the object in the drawing are not labeled. The drawing is not neat and in a final form.	Drawing possesses good detail. Scale and measurements are accurate and complete. Most component parts and materials of the object in the drawing are labeled. The drawing is neat and in a final form.	Drawing possesses exceptional detail. Scale and measurements are accurate and complete. All component parts and materials of the object in the drawing aren't labeled. The drawing is neat and in a final form.
Choice of Materials	Choice of materials contributed to poor performance or weakness or did not meet the constraints of the project.	Appropriate materials were selected that allowed the product to perform satisfactorily within the constraints of the project.	Appropriate materials were selected and there was an attempt at creative modification to make the materials work better within the constraints of the project.	Appropriate and sometimes challenging materials were selected and creatively modified in ways that improved the project within its constraints.
Craft	Construction follows no plan and does not follow the project constraints. The construction appears careless or haphazard. Many details need refinement for a working product.	Construction follows a plan, but does not meet most of the project constraints. The construction appears unfinished and many details need refinement for a working product.	Construction follows a plan and meets all of the project constraints. The construction appears complete, finished, and refined.	Great care was taken in the construction process so that the product works well, meets project constraints, and is expertly finished.
Function	Design flaws cause the project to fail under the constraints of the project.	Limited design flaws cause the project to fail occasionally under the constraints of the project.	The project functions consistently within the constraints of the project.	The project functions expertly and reliably within the constraints of the project.
Teamwork	Team roles are unclear, team decision-making is arbitrary, and consensus is not achieved. Inconsistent effort and productivity exist among group members. Conflicts needed adult intervention.	Team roles are unclear. Teamwork is inconsistently observable. Consensus was not reached among the group. Decisions are made by a few of the team members. Inconsistent effort and productivity exist among group members. Some conflicts required adult intervention.	Team roles are clear. Teamwork is consistently observable. There is an attempt to reach consensus about group decisions. Consistent effort and productivity exist among group members. Most conflicts are resolved within the group.	Team worked exceptionally well together and resolved conflicts with no outside intervention. Ideas were selected by consensus within the group. Consistent effort and productivity existed among group members.
Journaling	The journal does not capture daily work, ongoing successes, challenges, or an explanation of process. The journal contains no sketches or photographs. The detail is cursory and largely not helpful for reflection.	The journal captures infrequent moments of success and challenges, but little reflection on lessons learned is evident. The journal contains few sketches or photographs. The overall level of detail develops only a narrow range of reflection about the design.	The journal captures daily work and frequent moments of success and challenges, and offers developing reflection on lessons learned. The journal contains skillful sketches and/or photographs. The overall level of detail develops a strong range of reflection about the design.	The journal captures a daily record and moments of success and challenges, and offers insightful reflection on lessons learned. The journal contains skillful sketches and/or photographs. The overall level of detail develops only a strong range of reflection about the design.