

Guiding Inter-Disciplinary Research (transcript)

Exploring Fundamental Human Needs using the child's interests as a launchpad gives context to the study of history. Children can explore any detail in relation to any other detail, and by following their interests, you can expose them to important academic skills and concepts.

Children as young as six can use the approach that I'm going to be sharing today. Obviously, you'll need to modify your expectations and adjust the amount of support and scaffolding necessary, so you can align yourself with their developmental stage.

The approach I'm going to explain requires planning, patience, and persistence. Along the way, I'll offer suggestions for adapting it to meet the needs of younger or older students. Always err on the side of offering too much support and scaffolding, and back off as your child becomes more self-sufficient.

Before you propose a research project, begin by giving your child a vision of the whole for their area of interest by working through the Stages of Civilization lessons and doing a Horizontal Exploration of the human need that best aligns with the child's interest. Along the way, they'll ask questions, but instead of answering them or encouraging research right away, you can suggest they (or you, in the case of younger children) write down the questions on a sheet of paper or individual sticky notes.

Then, propose the following: "I've noticed you have a great interest in _____ and you have lots of questions. I would like to show you some ways to take a deep dive and become a real expert on the topic." Now, I have yet to meet an elementary child who doesn't want to be considered an expert, so most children will be eager to know more.

This is when you introduce the KWHL outline, which is a process of guided inquiry using a graphic organizer. I've used these outlines with children as young as six, and all the way through Upper Elementary. They provide a great balance of structure and freedom, and align well with the Montessori approach if you can encourage creative modes of research.

The "K" stands for "Know", and it refers to what the child already knows. The "W" stands for "Want", and refers to what they want to know - the child's questions. The "H" stands for "How", and it refers to the research methods the child will use to find answers to the questions in the "W" field. And the "L" stands for "Learned", which is where the child will record their answers.

While you can technically print this organizer on a sheet of paper, it's a lot more fun to make a poster with the KWHL headings and use sticky notes or index cards to fill in the quadrants. The first step is to have the child (or you) jot down things they already know about the topic based on their work with the Fundamental Human Needs materials. Try to narrow down a topic of interest to a particular time period or culture, but don't be concerned if younger children need to keep the focus broad and superficial. For example, a seven-year-old might be interested in

exploring how animals were used for transportation before the car was invented. They might write down: People used horses to travel long distances. Donkeys can carry heavy loads so people don't have to. Some people in cold climates use dogs to pull sleds. You can encourage Upper Elementary children to narrow down their focus to something more specific, perhaps by looking at the questions they asked during the work with the cards and choosing one. Then, they can write their first-column statements based on this much more narrow subject. They really don't need to write more than three or four statements, so help them pick which facts best align with their chosen topic.

The second column is where they will place their questions related to their research topic. These can be follow-up questions to dig deeper, but they don't have to align directly with the facts in the first column. So for example, a young child might ask: "How often did people have to stop and rest their horses?" "What's the largest animal people have used for transportation?" "How many dogs are needed to pull a sled?" In this case, the first and last questions are follow-ups on the facts they know, but the second question is unrelated. Upper Elementary children can try to use their questions to take a deeper dive into the facts they wrote in the first column, just remember that taking a deep dive is a skill that often takes time to develop, so it's ok if they come up with questions that are unrelated to the facts in the first column, as long as they align with the topic of the exploration.

Depending on your child's age and stamina, you might want to stop here and pick up the next day. When you're ready to continue, you'll go to the third column, where you and your child will determine how they'll answer these questions. This is where you need to think outside the box. It's very easy to focus on a book or the Internet, but we want our children to explore different avenues of investigation. This is the part that makes this activity "Montessori" and distinguishes it from a traditional school approach to report-writing. So, in addition to books and the Internet, what options do you have? Consider visiting local or online museums or interpretive centers, writing a letter to an expert in the field, attending a workshop or lecture, watching a documentary, or finding a Montessori material. You will certainly have to offer suggestions to your child, and you'll have to research these options together, but it's a great way of modeling how to turn to resources beyond the bookshelf to find answers.

This part of the project is ideal for presenting note-taking and outlining techniques. If you have the Timeline, you will want to look at the Note-Taking and Outline lesson in the 8-9 year-old column in the Language section. If your child is an emerging writer, you will want to do the note-taking for them and encourage them to focus on verbalizing their discoveries. Older children can obviously do this on their own, but it's always helpful to guide the process by making sure they have the skills ahead of time.

It's important to note that there's no deadline for this type of project: we're undergoing research for the sake of expanding our knowledge, not to get a grade or check off a box. At the same time, it's the adult's job to help the child work through the "messy middle" - the part of the project where progress is slower, information is disorganized, and the desire to quit is palpable. You can support their progress by asking "What's this project going to look like when it's done?" and

by breaking down the steps into manageable chunks and focusing on one at a time. While we don't want to set a deadline for the entire project, it can be helpful for some children if you propose gentle deadlines for parts of the project. It will depend on your child's personality and relationship with time.

The last column of the chart, where they record what they learned, can be filled out as they make progress on their research. This space can be a bit larger than the others, especially for older children who might be answering each question with lots of information. This is why sticky notes and index cards are useful, because they allow information to be moved around without a lot of erasing and re-writing.

In next week's lesson, we'll explore how to guide the creation of a finished product, and options for sharing their new knowledge with others. I hope you have fun working through your first KWHL project, and remember to keep your focus not on your vision of the finished product, but on the learning and growing that are happening along the way.