Science Center X: Human

Have you asked why we look like our parents? Why do people have only two legs? Let's look at our body and find out why we are the way we are.

NOTE: Only general ideas are given for this theme. Be sure to explore ideas online or at your local library.

Science Center X: Human

Steps

People

1. **Famous scientists.**
Focus on a scientist and present an exhibit around their work. This gives you a connection with actual people instead of ambiguous facts. Explore famous scientists for each of the "Science Center X" badges — these are the exhibit ideas to start. How might you incorporate famous scientists and their discoveries into exhibits for your theme?

2. **Culture.**
People around the world are different. They believe different things. They wear different clothes. They have different traditions. Respecting others means allowing them to celebrate their own culture and heritage without pushing our beliefs on them. Create a way to compare cultural norms. Celebrate a specific culture or many cultures. Examine a culture that no longer exists like the Mayans or Romans. How else might you bring a cultural aspect into your center?

3. **How I'm different.**
Using a simple figure drawing, ask kids to draw themselves on the sheet and note those things that make them different physically from their friends. This might be hair color, eye color, height, etc.

4. **Compare.**
Within a group, create ways to show in charts or graphs how your visitors compare. Perhaps everyone with brown hair makes an "x" on a white board, yellow hair makes an "o", etc. With a flannel board, you might have each person put a representation of themselves into different groups. For a more active version, ask questions that have one of two answers and those that agree with one move to your left and those that agree with the other move to your right. For example, if you ask if they have brown hair, those that do can be on one side and those who don't on the other. This allows each person to not only see themselves as individuals but as part of a group as well.

5. **Descriptive words.**
Provide words visitors can choose from to describe themselves. Print one word on each sheet of paper. You can cut them out in odd shapes so it doesn't look like someone printed and posted them. Also, angle them and make them interesting.

6. **Food pyramid.**
Everyone needs a healthy body. The food pyramid is designed to give you a plan for the food you eat each day. Check out the latest food pyramid. How might you incorporate this into an exhibit?

The Body

7. **Anatomy of the Human Body.**
Henry Gray's 20th edition (published in 1918) is in the public domain. You can use this for images for your exhibit on the body. Be sure NOT to use any editions 21st or later as they are protected by copyright. There are other books as well in the public domain that will work, but this is the most famous.

8. **Body parts.**
Can you name all your body parts? Matching sheets, trivia question cards and even a "Simon Says" game are different ways to actively introduce or reiterate where body parts are, their function and so much more.

9. **Bones.**
Bones are the framework of our bodies. Skeletons can be purchased or borrowed. You can make one out of paper or milk jugs. Beyond where they are and what they're called, focusing on making strong and healthy bones can be explored in an exhibit. Bone experiments might be interesting for your visitors such as making rubbery bones with vinegar or how different kinds of bone breaks actually look.

10. **Muscles.**
There are over 400 muscles in your body. When are your muscles the strongest? What happens when you push them too hard? What is atrophy? Almost any question you can think about muscles and exercising can be used for an exhibit. Don't just do one, select a group that works together. You can also do yoga, pilates, etc. as a way to discuss muscles. What else might you include in the exhibit?

11. **Body awareness.**
You can use the "Science Center X: Senses" for body awareness. You also might want to play games such as:

- Follow the Leader
- Hokey Pokey
- Simon Says

An obstacle course is also a great way to include senses, movement and other science activities. Explore different ways to show and experience body awareness.

12. **Body tricks.**
Try one or more of the following tricks to see how your body responds. A brief description is included in case it is called something else where you are.

- Stuck foot — lean right side of body against wall and lift foot
- Arm levitate — someone holds your arms against your body while you lift them up, then they let go (can also do it yourself)
- Glued fingers — thumbs together, knuckle together except ring fingers with a coin to drop

Of course, there are many other body tricks you can incorporate. Use your favorite or search online for more.

13. **Hobbies and recreational activities.**
Every one of us enjoys doing different things. Highlighting a hobby or recreational activity can be done by showing how to avoid injury, practicing skills and more. Can you make a full exhibit from a hobby or recreational activity?

14. **Human Genome Project.**
The goal of this project was to identify the approximate 30,000 genes in human DNA. This information is a great help to medical doctors. Some believe it will help determine which drugs are best for a person. Others believe they'll be able to treat and cure diseases. Of course, forensic scientists are also using DNA. How can you show information about this project and how it has affected our lives in an exhibit?

15. **Dominant and recessive genes.**
From eye to hair color and everything else that makes us a combination of our parents, genes are at work. You might pair up visitors and have them determine their own genes and whether their offspring would have a certain color hair or eyes. What other experiments might fit into an exhibit to demonstrate this?

16. **Cloning.**
Cloning is creating a duplicate of an organism. Find out about the sheep named Dolly to learn about cloning. Look at how to clone plants. Examine what the future might hold for cloning humans.

17. **Stem cell research.**
Another forward thinking exhibit idea is stem cell research. The theory, application and controversy make this an interesting topic in itself. Learn more and determine if you'd like to create an exhibit based on this.

18. **Explore more!**
How else might you present people as a scientific area of inquiry? My daughter wanted me to include a heart you could walk through for this badge program, but that takes a lot more skill than I have. Explore online resources and build upon this theme.

Supplements

SUPP_MBD_Brain Teasers.pdf
Minibook: Brain Teasers
SUPP_SCR_Body Parts.pdf
Scramble: Body Parts
SUPP_Uniquely Me.pdf
Draw yourself to show how unique a human you are
SUPP_WF_Body Parts.pdf
Word Find: Body Parts
SUPP_WF_Genetics.pdf
Word Find: Genetics

SUPP_Exhibit Planner.pdf
Exhibit Planner — Pre-planning and testing questions
SUPP_Scientific Inquiry.pdf
Scientific Inquiry — Printables for use with any exhibit theme

Sites to Explore

www.cdc.gov/scienceambassador/lesson-plans
www.kidactivities.net/post/School-Age-Science-Center-Supply-List.aspx
dearrichblog.blogspot.com/2012/01/can-i-reproduce-images-from-grays.html
www.genome.gov/10001772
www.juliantrubin.com/encyclopedia/genetics/dominant_recessive_gene.html
www.education.com/science-fair/article/clone-plant
www.allthingsstemcell.com/tag/science-buddies
www.projects.juliantrubin.com/science_fair_project/biotechnology/stem_cells_1.html
www.scholastic.com/home
fantasticfunandlearning.com/category/concepts/science
www.exploratorium.edu/explore
www.discoveryeducation.com/teachers/free-lesson-plans
kids.usa.gov/teachers/lesson-plans/science/index.shtml
www.teach-nology.com/teachers/lesson_plans/science
www.sciencefairadventure.com
www.yoursciencefairprojects.com
www.sciencefair-projects.org
www.sciencebuddies.org
www.freesciencefairproject.com
tryscience.org
sciencenetlinks.com/lessons
www.education.com/activity/science
pbskids.org/zoom/activities/sci
www.sciencebuddies.org
howtosmile.org
instructables.com
www.msms.bayer.us/msms/MSMS_Home.aspx
www.smithsonianeducation.org/educators/lesson_plans/science_technology.html

Check out larajla's Enrichment Project to start your own adventure.