Discover Dairy - Butter

Sections

Joey Scouts
Cub Scouts
Scouts
Venturer Scouts
Rover Scouts

Scouts VICTORIA

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Challenge Areas

COMMUNITY
CREATIVE
OUTDOOR
PERSONAL GROWTH

Scout Method Elements

COMMUNITY INVOLVEMENT
LEARNING BY DOING
NATURE AND THE OUTDOORS
PROMISE AND LAW
PERSONAL PROGRESSION
PATROL SYSTEM
SYMBOLIC FRAMEWORK
YOUTH LEADING, ADULTS SUPPORTING

SPICES Growth Areas

CHARACTER
EMOTIONAL
INTELLECTUAL
PHYSICAL
SOCIAL
SPIRITUAL

The Adventure

Where does butter come from? Make your own and find out!

Plan

1. Investigate sources, components, and products of diary including discussion around what sorts of animals produce milk. As a challenge, try to find the most obscure diary product you can – for instance yak butter or camel milk.
2. Investigate emulsions and how this applies to cream and butter. You can investigate emulsions using water and oil. It is also good to consider what other products you can find emulsions in. You can find out more about emulsions in food.
3. Hypothesis what other products might be made from the cream during and as part of the butter making process.
4. Read the safety requirements and discuss with your leaders/adult supervisors what supervision and safety requirements might be needed.
5. Collect the materials and ingredients required to make your butter. You will need the following: a jar with a tight seal, cream, bread or crackers, some cheese cloth, a small strainer, a spoon, a container, cold water, a bowl, and some paper towel.

Do

1. Set up the experiment and record initial observations of the ingredients. Note: The cream should be at room temperature.
2. Make sure everyone is aware of the safety rules.
3. Pour cream into jars and ensure that the lid is on tight. For a taster of butter, it is recommended to use no more than about 20 mL of cream per jar.
4. Vigourously shke the jar for around 20 minutes. Make sure to record observations as the butter is being produced – e.g. sound, feel, look, etc. As you shake, the cream will slowly turn into butter going from a thickened cream texture to a whipped cream consistency to a yellow solid with liquid. You may want to work in pairs to make your butter to share the shaking duties.
5. Once you have made your butter, remove the excess liquid by straining through some cheese cloth and a small strainer. You can also carefully drain the liquid out of the jar if this is easier. You may wish to store this liquid, which is buttermilk, for use in cooking.
6. Remove as much liquid as possible by placing the butter in some cold water and knead the butter to remove excess liquid. Removing the liquid will help your butter store for longer.
7. Taste the butter on some cracker or bread. You may like to include sprinkles to make fairy bread.

Review

1. Evaluate your hypothesis. What products were made? What could these other products be used for.
2. Consider if your butter tastes like butter from the shops. If not, why not? What is present in shop butter that isn't in your butter?
3. Consider what other utensils or methods could be used to make butter? How is butter made to get to the shops?
4. Consider what conditions (temperature, type of cream, etc) work best for making butter.

Safety

- Allergen warning: This challenge card involves the use of diary and may not be suitable for individuals who are lactose or milk protein intolerant, especially during the tasting section.
- Allergen warning: The best way to taste the butter is on bread or crackers and as such, this may not be suitable for gluten intolerant or Coeliac individuals. Substitutions and an awareness of cross-contamination should be used for tasting.
- Sharps risk – Glass jars may be used as part of this challenge card and, as such, there is a risk of breakage and cuts. Be careful and ensure that any broken glass is handled appropriately.

Variations

- Consider preparing some elements (such as pre-pouring cream into jars) for younger sections.
- Add some extras – such as salt or flavouring – to the butter.
- Try different types of cream – i.e. lactose free cream, coconut cream, goat cream, etc. Do these also make butter? Consider why or why not?
    - If using this variation, best results will likely be seen using creams that are advertised as suitable for whipping.
- You could run this activity as part of a larger diary or food program with other challenge cards.
- Use the butter to create a yummy dish such as bread and butter pudding or some caramel sauce.
- If available, you could go to a farm and do challenge cards around farming and the outdoors.
- As this challenge involves a LOT of shaking, it may be best to run this in pairs – especially with Joeys – or turn it in to a relay competition between patrols or dance party.