



Staff Name:
Zone: Beekeeping
Ability Range: NC Level 1-4
Target Group: EBD

Date:
Class:
Lesson Reference:
 Week 4 'Beeswax/Honey'

Learning Objectives:

- To examine the process of bees making and using wax in the hive.

Learning Outcomes:

- To be able to identify the formation of wax structures built in the hive.
- To explore the uses of beeswax in making candles, creams, polishes, ointments etc.

Challenge: More detail to answers through written work and written exercises.

Differentiation: 1 to 1 work sheets, peer support, 1 to 1 task, key words used.

AFL: Question and answer session.

Development of Skills/Cross Curricular Links:

LITERACY/COMMUNICATION

Reinforcement of key words, development of discussions through describing tasks and group activities.

ENTERPRISE

Communication, team work, using initiative.

PSHE

Development of environmental awareness.

STARTER ACTIVITY/INTRODUCTION

Explain to the students that we are going to be looking at beeswax by either visit a working hive/hive or examining pieces of beeswax combs.

MAIN PART OF LESSON

Explain how a honey bee makes wax (e.g. how it is extruded from their bodies and chewed) and the associated conditions (it can only happen at temperatures of 35°C). Describe how the beekeepers fix frames of wax foundation onto which the bees will then place their wax.

Examine wax for texture, smell, smoothness. Look at how the beekeepers filter and clean the wax and how it can be reused/ recycled.

Ask the students how does this compares with other waxes they have seen/used? (man made waxes are: inferior to beeswax; burn with a smoky flame; are cheap to make). Plan a comparison exercise with a candle and some beeswax. Record results in a table/powerpoint presentation.

Watch DVD how to make a beeswax candle <http://www.youtube.com/watch?v=OsFo6M8BtGA>

PLENARY

Ask the students for their observations of the lesson, what have they learned, do they know of any other uses for wax and do any other insects etc. secret wax?

Extension Tasks Make a beeswax candle.

Risk Assessment Teacher in charge to ensure all correct and appropriate risk assessments are carried out to ensure the health and safety of all of the students.

Disclaimer

The template used to produce this document is purely for guidance only and can be adapted to suit individual

| | |
|---------------------|---|
| VISUAL | Power point. |
| AUDITORY | Direct teaching. Explanation. |
| KINAESTHETIC | Practical activities through similar products. |
| SKILLS | Development of skills and knowledge. |
| SEN | Ref to statements. Behaviour/epilepsy plans. |
| REWARDS | Links to school reward system |

Student Name:_____

Lesson 4: Comparison of a Beeswax Candle

Verses a Paraffin Candle

| Factors | Beeswax Candle | Paraffin Candle |
|--|-----------------------|------------------------|
| What is the size of the candle? | | |
| What is the weight of the candle? | | |
| Describe the flame of the candle? | | |
| Is there any smoke? | | |
| Which candle has the most smoke? | | |
| Which candle produces the most light? | | |
| Which candle lasts the longest? | | |
| Which candle uses the wax up the quickest? | | |