Welfare and experimental procedures

Housing; pain/distress/euthanasia

Read:

- "Principles of Laboratory Animal Science"; chapter 4 (Behaviour, stress and well-being)
- Council of Europe, ETS123 Appendix A guidelines on accommodation and care of animals used for experimental and other scientific purposes / EU guidelines on accommodation and care of animals used for experimental and other scientific purposes., Annex III
- FELASA report "Pain and distress in laboratory rodents and lagomorphs"
- EU report "Recommendations for euthanasia of experimental animals".
- Environmental enrichment in rodents

Questions:

1. You are going to perform an animal experiment concerning the following research topics:
   a. toxicological research: drug toxicity via inhalation of the compound in the guinea pig;
   b. nutritional research related to cardiovascular problems; the influence of dietary cholesterol concentrations on the development of atherosclerotic plaques in the blood vessels of the heart in the minipig;
   c. pharmacological research: the influence of a new pharmacon (anxiolytic drug) on behaviour in the mouse.

   How would you accommodate these animals?
   Pay attention to:

- size and design of the cage/pen
- number of animals per cage
- group housing vs single housing
- climate (temperature, relative humidity, light, noise)
- environmental enrichment
- well-being of the animals and quality of the experiment

2. To assess well-being or pain/distress in these animals, which parameters would you use?

3. Which euthanasia method would you choose to kill the animals at the end of the experiment to study:
   a. in the guinea pig the effect of the drug inhalation on the lung epithelium,
   b. in the minipig the atherosclerotic plaques in the blood vessels,
   c. in the mouse pharmacon receptors in the brain.