

Paper bags use the raw material wood. This is a renewable resource which means it will not run out as we can keep planting more trees. Plastic bags however, use oil or gas as a raw material and since this is non-renewable it will eventually run out. Therefore if we just consider the raw materials, paper bags are much better.

Paper bags use slightly more energy to make them than plastic bags (1.7 MJ rather than 1.5 MJ). This means if we only consider energy use, plastic bags are better. However, this is only a small difference so this should not be a deciding factor.

Paper bags produce much more solid waste than plastic bags (50g compared to 14g). So if we consider just solid waste then plastic bags are better. Solid waste is bad, because it requires landfill to get rid of. Paper bags produce about half the carbon dioxide that plastic bags do, (0.23 kg compared to 0.53 kg). Since paper bags use wood as a raw material, some carbon dioxide will be used up due to photosynthesis as the trees grow. When we consider carbon dioxide only, paper bags are clearly better.

Overall, I think that paper bags are more environmentally friendly. This is because for raw materials and carbon dioxide they are much better than plastic bags. Since carbon dioxide is a greenhouse gas, lots of carbon dioxide will lead to global warming. I think the disadvantages of paper bags are less because energy use is about the same so there is only 1 clear disadvantage and 2 clear advantages.