

Arch 464
ECS
Spring 2004

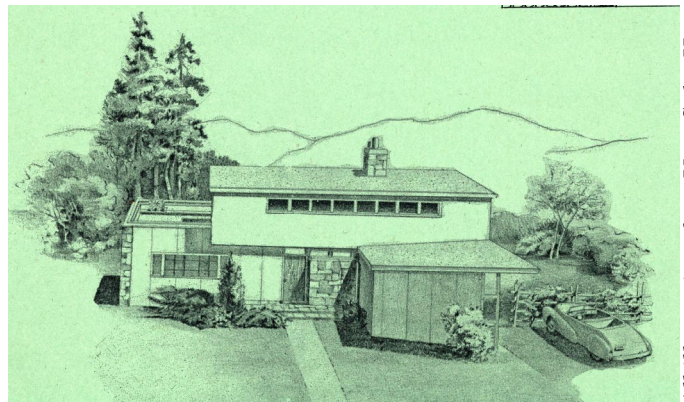
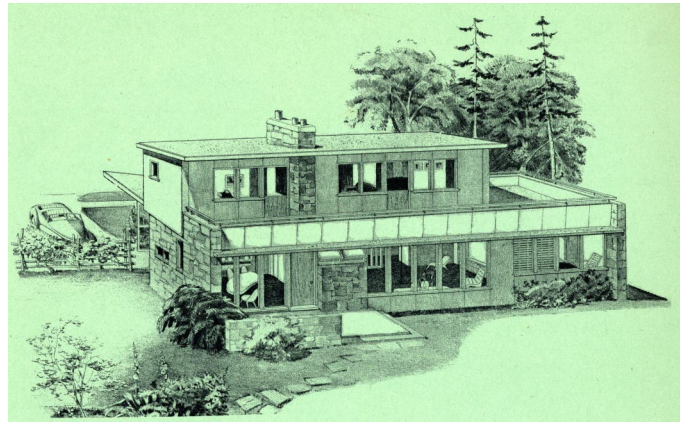
Name _____

Quiz #3

"Updating Ted Prichard's Solar Vision"

For this problem you are a time-traveling green architecture consultant for our own Ted Prichard. You've dropped in on Professor Prichard during the summer of 1947 as he's completing the design for his contribution to *Your Solar House* to be published by Libbey Owen Ford (LOF) the glass manufacturers. The book will feature a home for all 48 states and the District of Columbia designed by a prominent architect from each of those places. In 1947 LOF was marketing thermo-pane (double pane) glazing as the ultimate in thermal performance.

You have the opportunity to guide Prichard's vision beyond the narrow concern for using the sun effectively. When the house was designed, the principles of passive solar heating and summer sun shading were well-known. The intended site is a fairly level lot in the historic Fort Russell neighborhood on Moscow's east side. The property is bounded by residential lots to the east and west with a street to the north and an alley to the south. As you know Moscow's four-season climate has wet (sometimes snowy) winters and dry, sunny summers. Prichard's narrative description of the design is on page 2 of this quiz.



Perspective views of the Moscow house from the south (above) and north (below).

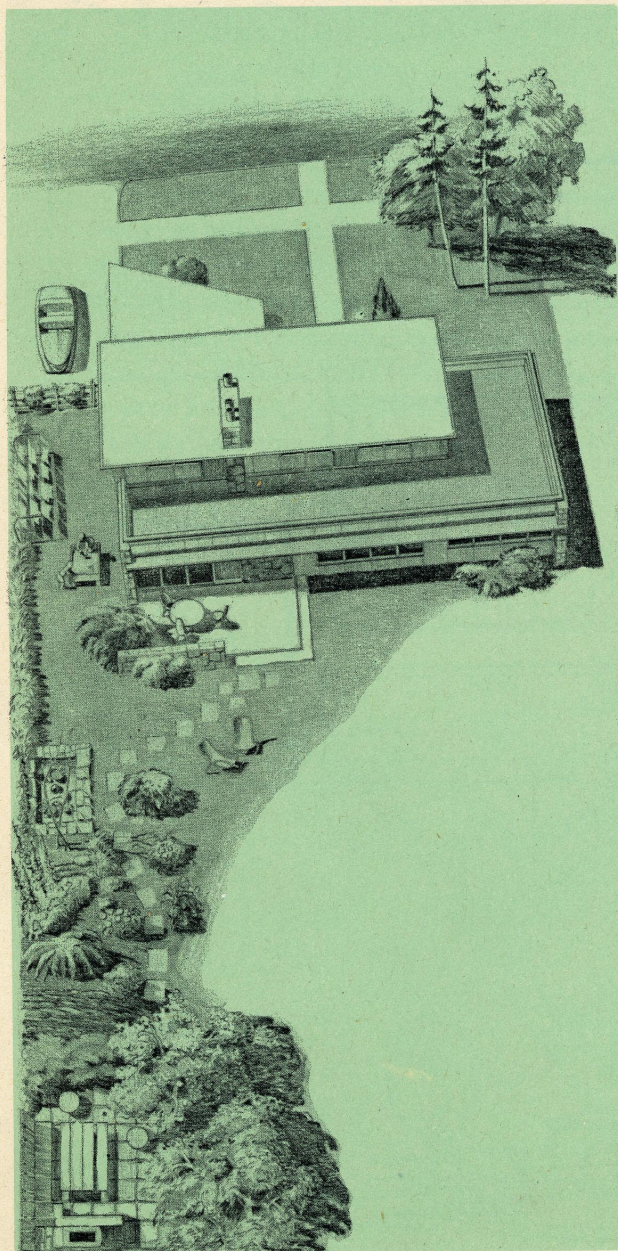
All illustrations from Your Solar House.

IDAHO

THEODORE JAN PRICHARD
Architect

To GENERALIZE about Idaho is folly; only a rash man would attempt it. It is a land of contradictions. Its 83,557 square miles make it twelfth in area among the forty-eight states; its population, 524,873 by 1940 count, places it forty-third in census rank. Its citizens have no cause for claustrophobia or misanthropy; there is a flavor of openhanded and openhearted hospitality akin to pioneer days.

To build a model home for Idaho likewise is folly.



Her mountains, lakes, woods, canyons, deserts, and rolling wheatfields are as varied as Washington, Oregon, and California together, and as far apart. Therefore, I have taken our own locale in Moscow, Idaho, and a family which, if a bit composite, is yet real, and have tried to build a home for it.

This is a little more house than they can afford; it always is. But if I know the breed, the mortgage will be retired long before it falls due.

The children, like all Idaho children, are self-reliant. Their mother often helps out at the store, at least until school lets out in the afternoon. There is no great reason why she should, except that she did when they first started out, and she likes to do it now. She can work or stay home as she pleases. There are no regular servants in the house. A helper may come in by the hour or the day if the family is lucky enough to get her. If there are guests, the master of the house doesn't mind lending a hand in the kitchen after they've gone.

These are important factors in this design. The children have their own world in the deckhouse. The all-purpose room will serve various needs. It will take care of a nurse if there is illness. It will house an overnight guest. It will be a retreat for some of the family when others are entertaining.

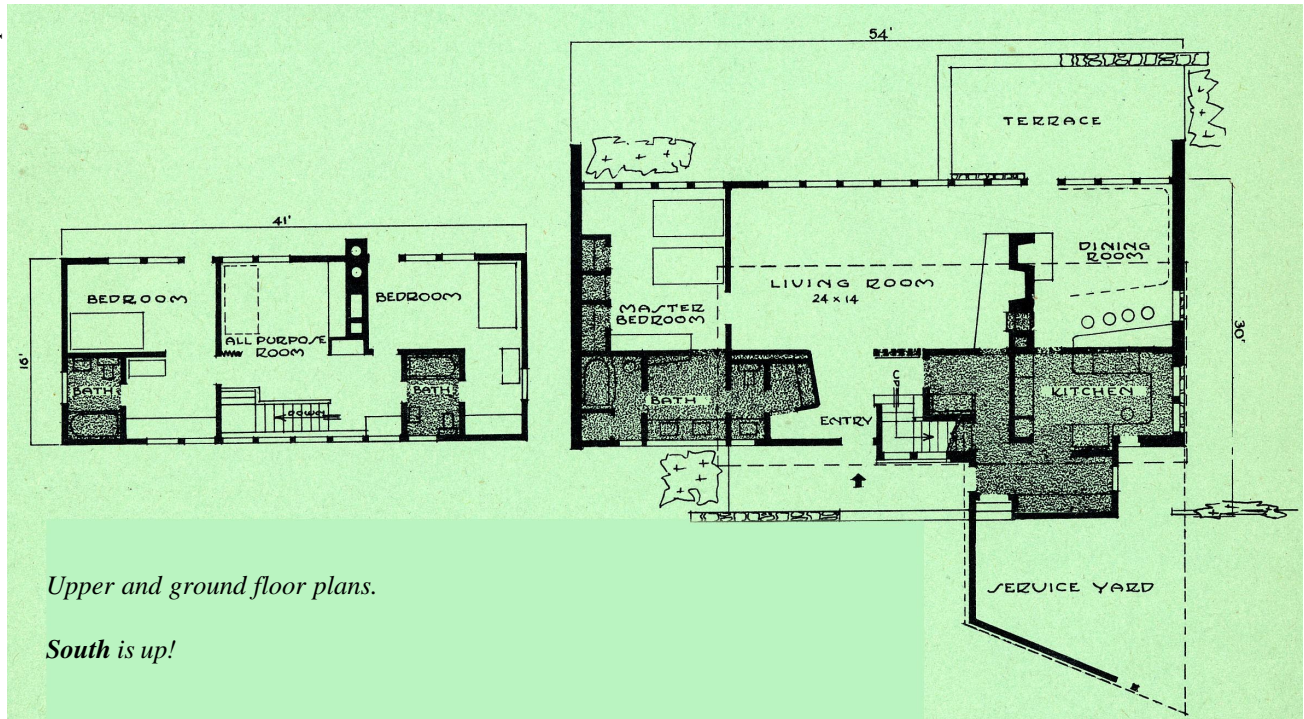
A too-open house is not practical here; the air cools rapidly when the sun goes down; the evenings, even in summer, are usually cool and sometimes downright cold. There is a good deal of dust in the air in the plowing seasons, or when the wind blows; the nights require wool blankets the year around. A little heat from September to June is necessary; December and January are rugged. The summer supper hour, however, can be wonderful, and a dining terrace, if not too shaded, is most useful.

As to style, Idaho is still on the conservative side. Investment of capital is a real concern, and while the individual will show a certain desire for the experimental, pioneer prudence usually wins out. For this reason a number of people interested in building were encouraged to express themselves on this matter. A fairly conservative house was the result—one, however, that would be livable. The materials are Idaho or Western. North Idaho is largely timberland. The rock is native and undressed.

Critique

1. Point out **four** features of the design that work toward sustainability. **Explain** why they are effective for a house in Moscow.

4 points



1

2

3

4

Low Tech Improvements

3 points

2. Suggest three low-tech improvements that Prichard could make to his design without relying on technologies that were not widely available in 1947. Explain each of your suggestions. Use sketches and diagrams to make your intentions clear.

1

2

3

Building Water

3 points

3. Suggest three high-tech improvements that Prichard could make to his design that would label him as a visionary, able to see into the future. Explain each of your suggestions. Use sketches and diagrams to make your intentions clear.

1

2

3