What need to be change when switch from Lamport to vector clocks?

Instead of the Lamport counter in the Lamport clock we could probably use an array to simulate the Vectorclock. The array will store the thread id and counter.
We also need to send the array in the sender's message and increase the self counter by one.

By the receiver, we have to compare the current message with each element of the received array to determine the maximum, then increase the self counter.
We need to change the compareTo() function, so that it can compare the time stored in the array.

When every index in the Array of one event is smaller, we need to put that event before the bigger event, when it's the same than two event will happens at the same time.

What kind of order would be implied by the vector clocks?

Implies ***partial ordering.***
By the vector clock the partial ordering will be implied. Since the total Ordnung is the history of the events which it is observed by the process itself , it implies that in global view of the processes the happen bevor relation ***(partial ordering)*** *is the implication from it.*

Would the history of all threads be identical? If not, how would you test that the exposed histories of the threads are correct?

Because the threads run parallel, it can happens that 2 threads send a message at the same time, and it differs from each other in the history

by e.g who send the message first. So it can happens that the threads will be different in the history log.
To check wether the exposed histories of the threads are correct, one must ensure that the ordering of the threads differs only for events with non-comparable timestamps.

What are the advantages/disadvantages of using Lamport Timestamps or vector clocks?

Advantage of Lambert or Vector:

We can determine the causal ordering of events and see easily which events are happening at the same time.
Needs no physical timing,

Avoiding synchronisation between local timing of the processes at OS level
Vector clock can shows the concurrency between tow events

Disadvantage:

Harder to implement, because it's not just only one value in the timestamps and it will be scale up with the number of use.

By Lambert clock it can’t show the concurrency between tow events